NOW FIRE RETARDANT IN ALL TYPES

Vectorbord®

for experimental and production work

PRE-PUNCHED INSULATING BOARDS

Vectorbord provides a convenient and economical method for assembling circuit components in both experimental and production units.

ECONOMICAL

Pre-punched Vectorbord cuts costs by eliminating most, if not all, time consuming board drilling operations. Convenient, ready to use Vectorbord makes it possible to get to actual assembly at once.

VERSATILE

Offered in a wide range of sizes, a variety of materials and a selection of pre-punched hole patterns, Vectorbord is suited for a wide range of requirements.

Each standard grid pattern shown, with the exception of Micro - Vectorbord (See pages 5 & 6), is available in 1/16" thick panels. Patterns A, C and L are available in FR - 2 Phenolic or Epoxy Paper panels.

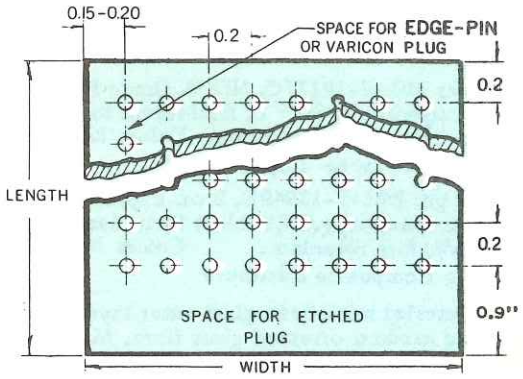
Vectorbord accepts eyelets, standard turned or Vector Push-in terminals, as well as self tap screws for attaching necessary hardware. .093" holes accept #4 self-tap screws (#2 or #3 for clearance); .062" holes accept #2 self-tap screws (# 0 for clearance).

APPLICATIONS

Vectorbord is recommended for both experimental work, where pre-punching enables changes to be made freely, and for many production jobs where production time can be greatly reduced by employing pre-punched Vectorbord.
Patterns A and L are recommended for general experimental work using Vector T9.4 or T9.6 Push-in terminals, turned terminals or solderless T30 and T32 Springclips. .093" holes in this pattern are spaced on a .265" grid for A pattern, & .250" grid for L pattern. For circuits using transistors, pattern E with .062" holes on 0.141" centers, is the same as G except oriented at 45° to the borders. Pattern F has .062" holes on 0.2" centers. Transistor leads can be passed directly down through the holes so that the transistor cover rests on the board where patterns E, G, and H are used. Pattern H with .062" holes on 0.1" centers provides high component density. For additional patterns see tables on pages 3 and 6.

COPPER CLAD VECTORBORD

Economical Copper Clad Vectorbord is ideal for making etched circuits. This convenient laminated board is available in 1 oz. CU (.0014") in phenolic or 2 oz. CU in Epoxy glass and Epoxy paper, copper clad 1 or both sides, 1/16" thick. It can be obtained in F, G or P Patterns or without pre-punched holes. While the F pattern is considered best for etching by providing sufficient space for lines of the copper, the G pattern having 1/16" holes on alternate centers of 0.1" grid is also stocked.



COPPER-CLAD BOARDS
3106-1XXXP, 3070-1XXXP
SEE DETAILS ON BOTTOM OF PAGE 3.

Pre-punched boards are available to fit the extruded grooves of Vector-Pak cases so that no special board mounting brackets are required. Suitable boards are listed in tables pages 3 & 6. On most listed boards, connectors can be mounted on one or both ends so that boards plug in, & test points can be provided. See Vectorconn & Elco Varicon receptacles Sec. IV-A.

Etched Circuits in minutes on copper clad Vectorbord are available with Vector Etched Circuit Kits as described in Section IX, Page 7.
The only Direct Positive Photoresist Etching Kit on the market is listed in Section IX, Page 5A with a complete line of photosensitized copper clad boards.

SPECIAL SIZES AND PATTERNS

Special sizes and hole layouts can be made to order if one of the standard catalog items does not meet requirements. All patterns except G, H, K, M and Q are punched a single row at a time so that spacing can be changed in one direction if special applications so require. Spacing can be further modified by removing punches to eliminate rows of holes in the other direction. The press feed may be set at 0.1", 0.141", 0.188", 0.2", 0.25", 0.265" or their multipliers.

When ordering special size boards the following MAXIMUM BOARD WIDTHS apply:
Patterns A, L, & F in phenolic, epoxy paper or glasslaminates: 20".
Patterns B, C, and E all materials: 6".
Pattern G in phenolic & epoxy paper: 20". in epoxy glass: 16".
Pattern H in epoxy glass or glass composite: 4.8".
Patterns P and Q: 8.5".
Patterns M and K: 4".
The maximum length for all materials is 38".

NOW FIRE RETARDANT IN ALL TYPES

MATERIALS

Phenolic Paper Laminate

Type PBE-P per Fed. Spec. L-P-513, NEMA Grade FR-2. This is a cold punching type with fire retardant characteristics. Maximum operating temperature 250° F. Color: Natural (cream to tan.)

Phenolic Paper Laminate- Copper Clad

NEMA Grade FR-2. 1 oz. copper clad one side or two sides (.0014 thk.) Most economical of copper clad laminates. Same color and operating temperature as above. Fire retardant.

Epoxy Paper Laminate

Type PEE per MIL-P-22324, NEMA Grade FR-3. This is a cold punching grade, maximum operating temperature, 250° F. Fire retardant. Color: Cream.

Epoxy Paper Laminate- Copper Clad

Type FL-PH per MIL-P-13949D, 2 oz copper cladding (.0028 thk.) one or two sides. Same laminate as above. Color: Cream. Fire retardant.

Epoxy Glass Laminate

Type GEE per MIL-P-18177C, NEMA Grade FR-4. Maximum operating temperature, 300° F. Equivalent to NEMA Grade G-10 but fire retardant in addition. Color: Buff or Green

Epoxy Glass Laminate- Copper Clad

Type FL-GF per MIL-P-13949D, 2 oz. copper one or two sides. Copper cladding (.0028 thk.) Same laminate material as above. Fire retardant. Color: Buff or Green

Epoxy Glass Composite Laminate

This new material has woven glass outer layer. The center is macerated random oriented glass fibre. Meets electrical requirements of MIL-P-18177C, Type GEE and the fire resistance requirements of NEMA Grade FR-4. Maximum operating temperature, 300° F. After extensive punching this composite has greater flexural strength than G-10 Epoxy Glass in the same hole pattern. Color: Green

TOLERANCES ON VECTORBORD

Pitch - 0.007" per inch.
Note: To special order, P pattern Micro-Vectorbordnow available for mounting of components for semi-automatic wire-wrapping. Write factory.
1/16" thickness - ±0.008"
3/32" thickness - ±0.01"
Hole Size: See pattern illustrations, pages 3 and 4.

LAYOUT PAPER

Grid paper is available for most of the hole patterns. With this the circuit may be planned in advance and, when laid over the board, grid paper facilitates placement of components. Grid Pattern in fade-out Blue.

CATALOG NUMBER	SIZE	PATTERN
R173A-1	8½" X 17"	A
R173A	8½" X 11"	A
R173F	8½" X 11"	F
R173G	8½" X 11"	G AND Q
R173H	8½" X 11"	H AND P

ACCESSORIES

PRODUCT	SECTION	PAGE(S)
TERMINALS	VII	1 THRU 8
INBORD PINS	VII	7, 8
EDGEBORD PINS	IVA	5
EYELETS	VII	4, 7, 8
BUS STRIPS	IV	C
GRID PAPER	II	2
BREADBOARDING ACCESSORIES	IX	5
RECEPTACLES	IVA	1 THRU 4
PAD CUTTERS	IV	C

RANDOM-PAK VECTORBORD

Assorted Vectorbord types and sizes in small pieces from 1" to 4 1/2" in each direction. May have occasional minor imperfections.

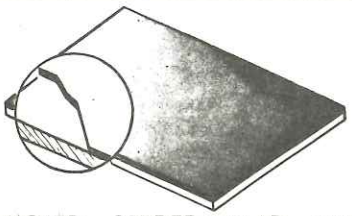
CATALOG NO.	DESCRIPTION	PACKAGE SIZE
X3770-062	PREPUNCHED GRIDS WITH .062" DIA. HOLES IN RANDOM SIZES & MATERIALS.	SET OF 10 PCS.
X3770-093	PREPUNCHED GRIDS WITH .093" DIA. HOLES IN RANDOM SIZES & MATERIALS.	SET OF 7 PCS.
X3770-1	COPPER CLAD BOARDS IN RANDOM SIZES AND MATERIALS. MOSTLY UNPERFORATED BUT WITH SOME PIECES HAVING .062" OR .042" HOLES ON GRID PATTERN IF SURPLUS MATERIAL IS AVAILABLE.	SET OF 6 PCS.

UNPUNCHED INSULATING BOARDS

CATALOG NO.	LGTH.	WDTH.	THK.	NOTCHED FIG. 1	COPPER-CLAD	MATERIAL
17/4.8 WE	17.0	4.8	1/16	NO	NO	EPOXY GLASS
CU90/80-1	9.0	7.99	1/16	NO	1 SIDE	PHENOLIC
CU65/45-2	6.5	4.5	1/16	NO	2 SIDES	PHENOLIC
CU65/45-1	6.5	4.5	1/16	NO	1 SIDE	PHENOLIC
CU45/27-1	4.5	2.73	1/16	NO	1 SIDE	PHENOLIC
CU45/30WE-1	4.5	3.0	1/16	NO	1 SIDE	EPOXY GLASS
CU65/27WE-1	6.5	2.73	1/16	NO	1 SIDE	EPOXY GLASS
CU65/45WE-1	6.5	4.5	1/16	NO	1 SIDE	EPOXY GLASS
CU65/45WE-2	6.5	4.5	1/16	NO	2 SIDES	EPOXY GLASS
CU70/45WE-1	7.0	4.5	1/16	NO	1 SIDE	EPOXY GLASS
CU70/45WE-1N	7.0	4.5	1/16	YES	1 SIDE	EPOXY GLASS
CU70/45-2N	7.0	4.5	1/16	YES	2 SIDES	EPOXY GLASS
CU85/45WE-1	8.5	4.5	1/16	NO	1 SIDE	EPOXY GLASS
CU85/45WE-2	8.5	4.5	1/16	NO	2 SIDES	EPOXY GLASS
CU159/80WE-1	15.85	7.98	1/16	NO	1 SIDE	EPOXY GLASS

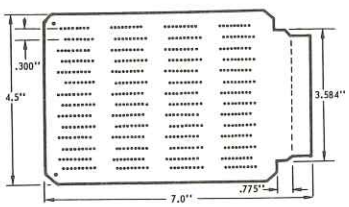
VECTORBORD WITH P PATTERN GRID PER FIG. 1

CU70P45WE-2	7.0	4.5	1/16	NO	2 SIDES	EPOXY GLASS
CU70P45WE-1	7.0	4.5	1/16	NO	1 SIDE	EPOXY GLASS
CU70P45WE-1N	7.0	4.5	1/16	YES	1 SIDE	EPOXY GLASS



UNPUNCHED COPPER CLAD BOARD

CUT TO 6.5" OVERALL AFTER PLATING

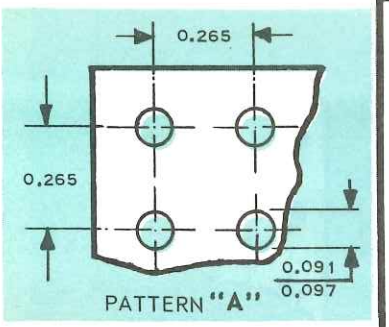


CONTOUR BOARDS
with .042" holes on 0.1" centers for D.I.P.'s
FIG. 1

PRE-PUNCHED INSULATING BOARDS

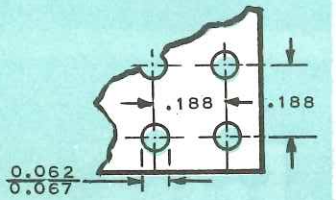
PATTERNS. A, B, C, E, F.

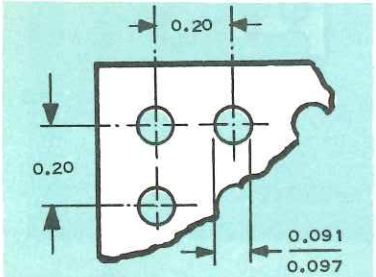
VECTORBORD



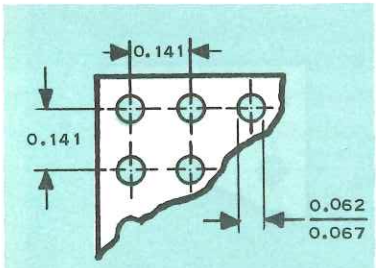
PATTERN "A"

PATTERN "B"

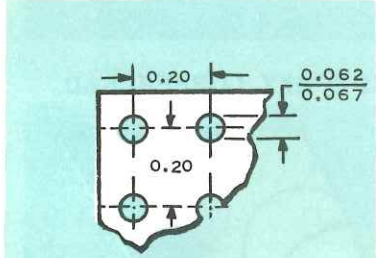




PATTERN "C"



PATTERN "E"



PATTERN "F"

* IRREGULAR BORDERS

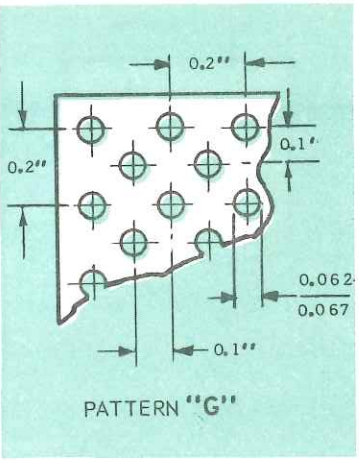
PAT.	MATERIAL	CATALOG NO.	LENGTH	WIDTH	THICK-NESS	COPPER CLAD
A	PHENOLIC	18A18	4.8	4.8	1/16	None
		32A3	8.51	.82	1/16	None
		32A9	8.51	2.41	1/16	None
		32A17	4.5	8.5	1/16	None
		32A18	8.51	4.8	1/16	None
		64A17	4.5	17.0	1/16	None
		64A18	16.99	4.80	1/16	None
		72A32	19.11	8.51	1/16	None
		32AA7	8.51	1.88	3/32	None
		32AA9	8.51	2.41	3/32	None
		32AA18	8.51	4.80	3/32	None
		64AA18	16.99	4.80	3/32	None
		64AA32	16.99	8.51	3/32	None
		64AA132	35.01	16.99	3/32	None
	EPOXY PAPER	32A17EP	4.5	8.5	1/16	None
		64A17EP	17.0	4.5	1/16	None
		64A18EP	16.99	4.80	1/16	None
		32AA18EP	8.51	4.80	3/32	None
		64AA18EP	16.99	4.80	3/32	None
		64AA32EP	16.99	8.51	3/32	None
		132A64EP	35.0	17.0	1/16	None
	EPOXY GLASS	32A18WE	8.51	4.80	1/16	None
		64A18WE	16.99	4.80	1/16	None
B	PHENOLIC	45B30	8.51	5.69	1/16	None
		90B30	16.97	5.69	1/16	None
C	PHENOLIC	85C24	16.99	4.80	1/16	None
E	EPOXY GLASS	120E33WE	17.00	4.80	1/16	None
F	EPOXY PAPER	85F24EP*	16.99	4.80	1/16	None
		85F42EP*	16.99	8.51	1/16	None
	EPOXY GLASS	175F99WE	35.00	20.00	1/16	None
	COPPER CLAD EPOXY GLASS	85F42WEC1	16.99	8.51	1/16	One Side
	COPPER CLAD PHENOLIC	42F22C1	4.5	3	1/16	One Side
		42F22C2	8.51	4.5	1/16	Two Sides
		THE FOLLOWING BOARDS HAVE SPECIAL UNPUNCHED SPACE FOR ETCHED PLUG (SEE ILLUSTRATION, P.1).				
		3070-1XXXP	4.5	3	1/16	One Side
		3106-1XXXP	6.5	4.5	1/16	One Side

VECTORBORD

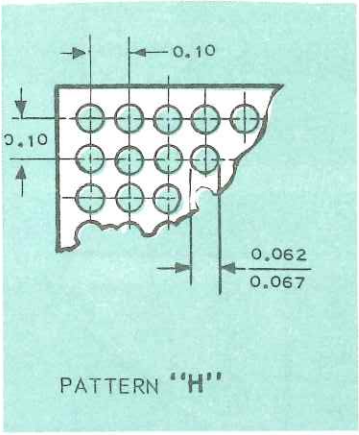
PRE-PUNCHED INSULATING BOARDS

PATTERNS "G", "H" AND "L".

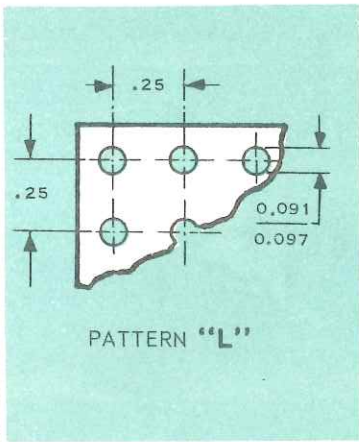
PAT.	MATERIAL	CATALOG NO.	LENGTH	WIDTH	THICK-NESS	COPPER CLAD
G *	PHENOLIC	42G24	8.51	4.80	1/16	None
		42G42	8.51	8.51	1/16	None
		42G22	8.5	4.5	1/16	None
		85G22	17.0	4.5	1/16	None
		85G24	16.99	4.80	1/16	None
		85G42	16.99	8.51	1/16	None
		95G43	19.00	8.60	1/16	None
		95G87	19.00	17.40	1/16	None
		95G175	35.00	19.00	1/16	None
	EPOXY PAPER	32G22EP	6.5	4.5	1/16	None
		42G22EP	8.5	4.5	1/16	None
		42G24EP	8.51	4.8	1/16	None
		85G22EP	17.0	4.5	1/16	None
		85G24EP	16.99	4.80	1/16	None
		85G42EP	16.99	8.51	1/16	None
	EPOXY GLASS	32G22WE	6.5	4.5	1/16	None
		42G22WE	8.5	4.5	1/16	None
		42G24WE	8.51	4.80	1/16	None
		42G42WE	8.51	8.51	1/16	None
		85G22WE	17.0	4.5	1/16	None
		85G24WE	16.99	4.80	1/16	None
		85G42WE	16.99	8.51	1/16	None
		175G22WE	35.0	4.5	1/16	None
	COPPER CLAD EPOXY GLASS	42G22WEC1	8.5	4.5	1/16	One Side
		42G22WEC2	8.5	4.5	1/16	Two Sides
H *	EPOXY GLASS	170H48WE-032	17.0	4.8	1/32	None
	EPOXY GLASS COMPOSITE	170H48GP	17.0	4.8	1/16	None
		85H48GP	8.5	4.8	1/16	None
L	PHENOLIC	17L11	4.5	3	1/16	None
		26L18	6.5	4.5	1/16	None
		34L19	8.51	4.8	1/16	None
		68L19	16.99	4.8	1/16	None
		68L34	16.99	8.51	1/16	None
		34LL19	8.51	4.8	3/32	None
		68LL19	16.99	4.8	3/32	None
		68LL34	16.99	8.51	3/32	None
		140LL68	35.01	16.99	3/32	None
	EPOXY PAPER	140L68EP	35.0	17.0	1/16	None



PATTERN "G"



PATTERN "H"

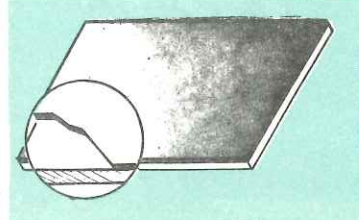


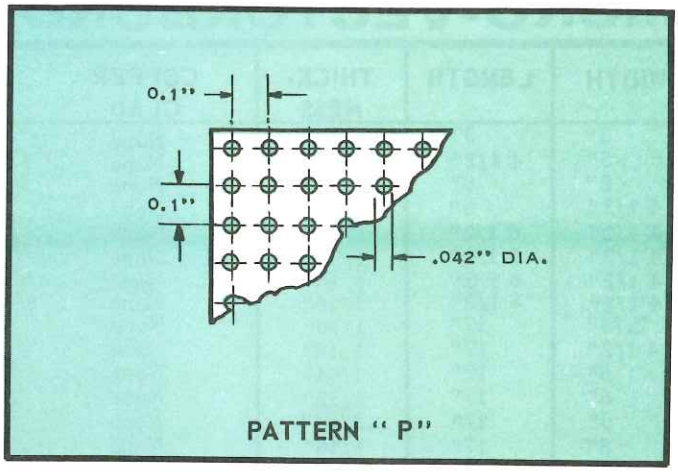
PATTERN "L"

* IRREGULAR BORDERS ON TWO NARROWEST ENDS.

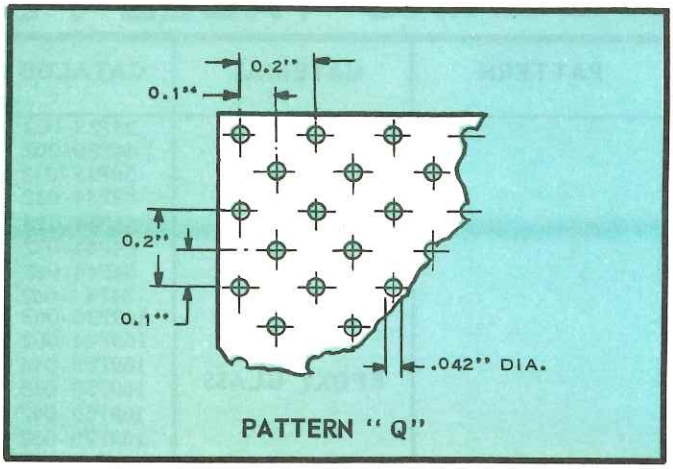
UNPUNCHED INSULATING BOARDS, GLASS EPOXY AND GLASS EPOXY COPPERCLAD.

	EPOXY GLASS	17/4.8WE	17.0	4.8	1/16	None
	COPPER CLAD EPOXY GLASS	CU45/30WE-1	4.5	3	1/16	One Side
		CU65/45WE-1	6.5	4.5	1/16	One Side
		CU85/45WE-1	8.5	4.5	1/16	One Side
		CU65/45WE-2	6.5	4.5	1/16	Two Sides
		CU85/45WE-2	8.5	4.5	1/16	Two Sides

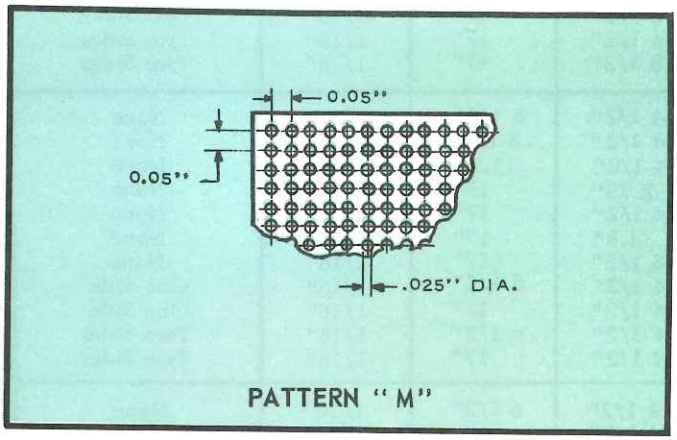




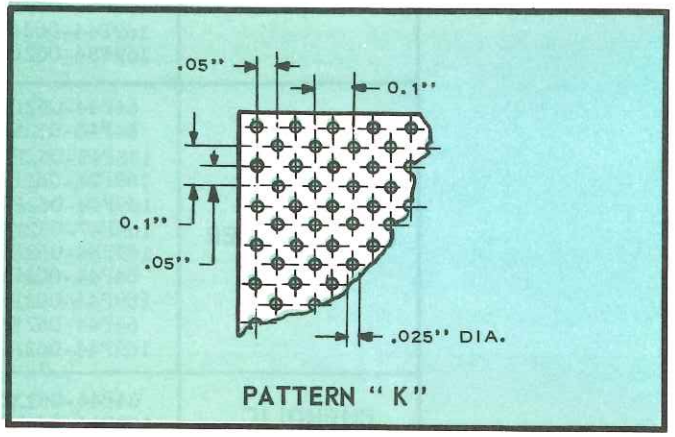
PATTERN " P"



PATTERN " Q"



PATTERN " M"



PATTERN " K"

MICRO-VECTORBORD

PERFECT MATE FOR D.I.P.

Micro-pattern VECTORBORD® is pre-punched insulating board with an overall grid of small closely spaced holes. P pattern is ideal for Dual-in-Line Circuit Packages, sockets and other micro-miniature modules. With these small hole patterns higher densities can be achieved than with patterns previously available.

USE WITH FLAT-PACKS

MICRO-VECTORBORD is especially useful in making cordwood modules. Small plug-in circuit cards with edge mounted plug elements can also be quickly made, using available connectors.

When ordering special sizes the following maximum widths apply: 8.5" for P and Q Patterns, and maximum width on M and K Patterns is 4".

SPECIFICATIONS

For Material Specifications see Section II, Page 2.

ACCESSORIES

For useful accessories, see Sections and Pages listed below:

Product	Section(s)	Page(s)
Terminals	VII	7,8
	IV	20
Inbord Pins	VII	7,8
Edgebord Pins	IV	7,11
Eyelets	VII	4,7,8
D.I.P. and other sockets	IV	20B
	X	1, 2
Bus Strips	II	4A
Grid Paper	II	2
Mounting Pads to adapt TO-5 pkgs. to P Pattern	IV	20B
Solderless Slip-on Contacts	IV	20B
Breadboarding Accessories	IX	14
Vectorconn Receptacles	IVA	1-4
Pad Cutters	II	7

VECTORBORD

ORDERING TABLE FOR MICRO-VECTORBORD

PATTERN	MATERIAL	CATALOG NO.	WIDTH	LENGTH	THICK-NESS	COPPER CLAD
P	EPOXY GLASS	29P29-062	3"	3"	1/16"	None
		44P29-062	3"	4 1/2"	1/16"	None
		59P19-032	2"	6"	1/32"	None
		59P44-032	4 1/2"	6"	1/32"	None
		64P44-016	4 1/2"	6 1/2"	1/64"	None
		64P44-032	4 1/2"	6 1/2"	1/32"	None
		64P44-062	4 1/2"	6 1/2"	1/16"	None
		84P44-062	4 1/2"	8 1/2"	1/16"	None
		169P26-062	2.73"	17"	1/16"	None
		169P44-062	4 1/2"	17"	1/16"	None
		169P59-016	6"	17"	1/64"	None
		169P59-032	6"	17"	1/32"	None
		169P59-047	6"	17"	3/64"	None
		169P79-062	8"	17"	1/16"	None
		169P84-062	8 1/2"	17"	1/16"	None
		349P84-062	8 1/2"	35"	1/16"	None
		169P44-062C1	4 1/2"	17"	1/16"	One Side
		169P59-032C1	6"	17"	1/32"	One Side
		169P84-062C1	8 1/2"	17"	1/16"	One Side
		169P44-062C2	4 1/2"	17"	1/16"	Two Sides
		169P84-062C2	8 1/2"	17"	1/16"	Two Sides
	EPOXY PAPER	64P44-062EP	4 1/2"	6 1/2"	1/16"	None
		84P44-062EP	4 1/2"	8 1/2"	1/16"	None
		138P42-062EP	4 1/2"	13.9"	1/16"	None
		169P26-062EP	2.73"	17"	1/16"	None
		169P44-062EP	4 1/2"	17"	1/16"	None
		169P47-062EP	4.8"	17"	1/16"	None
		169P84-062EP	8 1/2"	17"	1/16"	None
		64P44-062EPC1	4 1/2"	6 1/2"	1/16"	One Side
		169P44-062EPC1	4 1/2"	17"	1/16"	One Side
		64P44-062EPC2	4 1/2"	6 1/2"	1/16"	Two Sides
		169P44-062EPC2	4 1/2"	17"	1/16"	Two Sides
	PHENOLIC	64P44-062XXXP	4 1/2"	6 1/2"	1/16"	None
		169P44-062XXXP	4 1/2"	17"	1/16"	None
		169P59-062XXXP	6"	17"	1/16"	None
Q	EPOXY PAPER	84Q42-062EP	8 1/2"	17"	1/16"	None
	EPOXY GLASS	84Q42-062	8 1/2"	17"	1/16"	None
		84Q42-062C1	8 1/2"	17"	1/16"	One Side
		84Q42-062C2	8 1/2"	17"	1/16"	Two Sides
M	MYLAR	336M76-007	4"	17"	.007"	None
	EPOXY GLASS	76M38-032	2"	4"	1/32"	None
		126M76-032	4"	6 1/2"	1/32"	None
		166M76-032	4"	8 1/2"	1/32"	None
		336M76-032	4"	17"	1/32"	None
		336M76-032C1	4"	17"	1/32"	One Side
		336M76-032C2	4"	17"	1/32"	Two Sides
K	EPOXY GLASS	168K38-032	4"	17"	1/32"	None

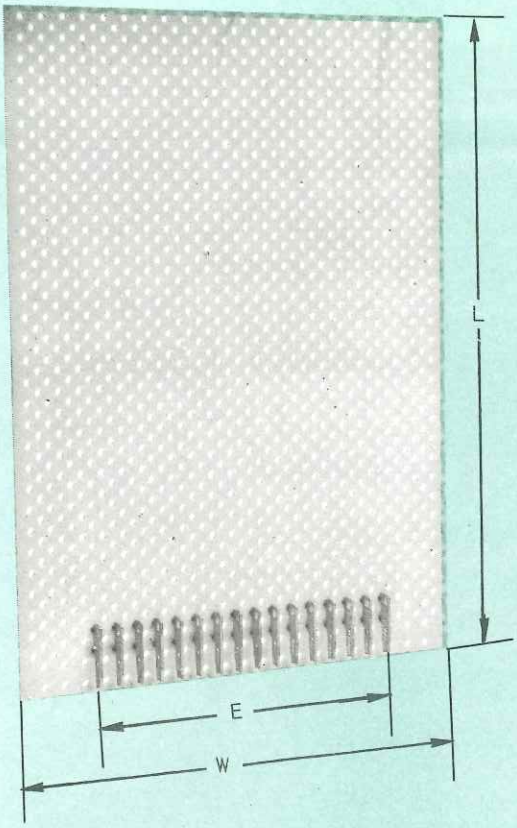
Widths of 4 1/2", & 8 1/2" available full length 35", "P" Pat.; M pattern 4" x 35" with special set-up charge.

EXPLANATION OF CATALOG NUMBERS

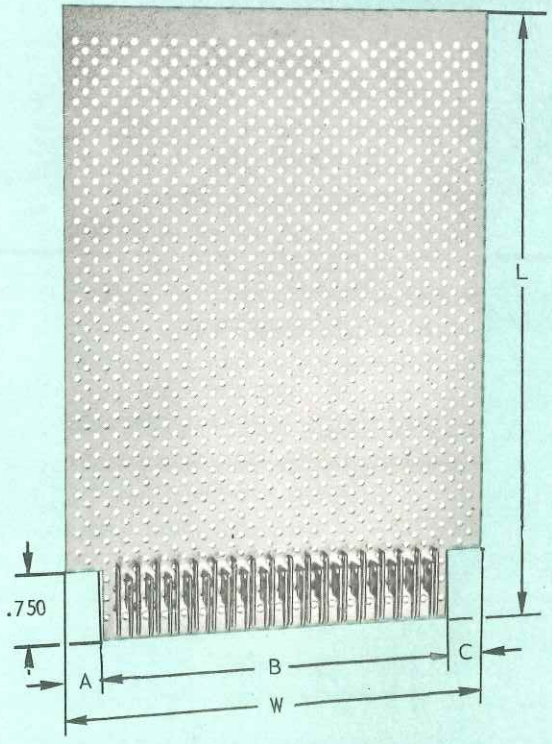
59 P 19 /032C1

- 59 — No. of Holes or pitch distances (Length)
- P — Pattern of Holes Layout (.042" dia. holes on 0.1" ctrs.)
- 19 — No. of Holes (Width) or pitch distances
- /032 — Thickness of Board
- C1 — Copper Clad 1 side

G PATTERN DISCRETE COMPONENT PLUGBORD



812 PLUGBORD



848WE PLUGBORD

ELCO VARICON TYPE -- ONE TIER

Ideal for making manually wired prototypes which can later be made as etched circuits. For short production runs, hand wired boards can often be made faster and less expensively than etched boards, especially when using Vector Solder-Thru insulated wire (2323A-32-2).

These boards have an overall grid of precision punched 1/16" dia. holes on alternate intersections of a 0.1" grid for optimum mounting of JEDEC type transistors, terminals (T28 Push-In series), turned type terminals (T18), eyelets (T15.22) or component leads.

These boards have Elco Varicon contacts installed. See Sec. IVA, p. 7, for contact specifications. Varicon contacts and matching receptacles provide maximum contact reliability and are particularly recommended where vibration and hostile environmental conditions exist.

ORDERING INFORMATION

CAT. NO.	LENGTH L	WIDTH W	E	INSTALLED CONTACTS	MAT'L	MATING RECEPT.
812	6.5	4.5	3	16	EP	R616-1
812WE	6.5	4.5	3	16	WE	R616-1
837	4.5	3.0	2.2	12	EP	R612-1
837WE	4.5	3.0	2.2	12	WE	R612-1

Materials: EP - Epoxy Paper; WE - Epoxy Glass. All fire retardant. See specifications at end of section.

NOTE: The 3" wide card can be cut down to 2.73" to fit Vector-Pak 3 1/2" high card cage or 2.85" high EFP Cases.

ELCO VARICON TYPE -- TWO TIER

Save time and space where more contacts are required with two-tier Varicon type Plugbords. These Plugbords have contacts on 0.1" spacing instead of 0.2" as on single-tier boards. The Elco Varicon contacts on the bottom edge of the Plugbord provide terminations for the various circuit elements. Leads may be easily soldered to the contacts using the rectangular hole. Bare tinned copper wire or Vector Solder-Thru insulated wire may be used for inter-component connections to eliminate wire stripping. When using bare wire, all cross-overs are accomplished by component crossing conductors.

Circuit changes are easily made because the component bodies and leads may be readily moved. The foregoing method makes the wired circuit topologically identical to a printed circuit bearing conductors only on one side. It also makes the circuit easy to trace for testing and servicing.

ORDERING INFORMATION

CAT. NO.	LENGTH L	WIDTH W	CONTACTS		NOTCH DIM.			MAT'L
			UPPER	LOWER	A	B	C	
848WE*	6.5	4.5	17	18	.397	3.76	.397	WE
2123AWE	8.5	6.25	23	24	.625	5.0	.625	WE
2436	6.5	4.5	17	18	.450	3.6	.450	EP
2309B	4.45	6.5	14	15	1.7	3.0	1.8	EP
2309C	4.45	6.5	20	21	1.1	4.2	1.2	EP

Materials: EP - Epoxy Paper; WE - Epoxy Glass. See specifications at end of this section.

*MATING RECEPTACLE IS PART NO. R635. USE ELCO TYPE 7001 RECEPTACLES FOR OTHER PLUGBORDS LISTED.

PLUGBORDS

"G" PATTERN DISCRETE COMPONENT PLUGBORDS

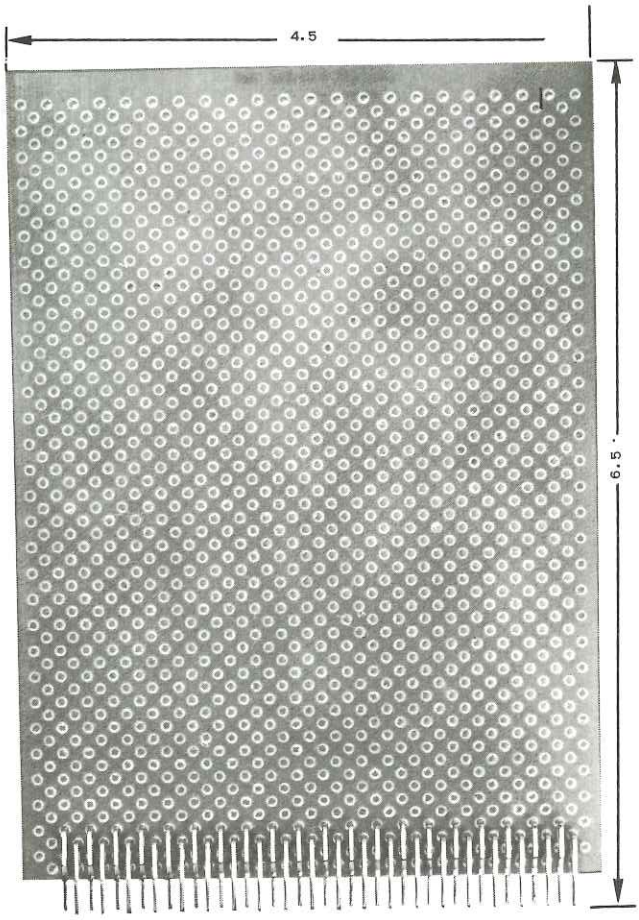
VECTOR EJBORD PIN TYPE - ONE AND TWO TIER

PLUGBORDS

Plugbords listed here are ready to wire and have .040" diameter round pins which fit into Vectorcomm Receptacles, Cup Receptacles (see Sec. IVA), or most other pin-socket type receptacles of this size. These Plugbords are provided with an overall grid pattern of .062" holes on alternate 0.1" centers (Vector "G" pattern) which accept Vector Push-In T28 MINI-KLIPS, eyelets, or turned type terminals.

Vector Ejbord Pins mount easily wherever needed on circuit cards in single or double tiers. Pins are spaced on 0.1" or 0.2" centers, or as required. Pins may be readily attached to circuit boards with hand tool P93A, or power tool P118-1*. Factory installation to customer order is also available for etched circuit boards.
CARD GUIDES: Edge Pin Plugbords should be supported laterally to protect pins and guide Plugbord into position. Card Guide end pieces for listed receptacles are illustrated with receptacles in Sec. IVA. They may also be bolted direct to a chassis for card support. When it is required to rack mount large numbers of cards side by side, a Vector Pak Card Cage or the Elco Varipak Card Cage can be used.

*Special order only. Contact factory.



842-241WE PLUGBORD

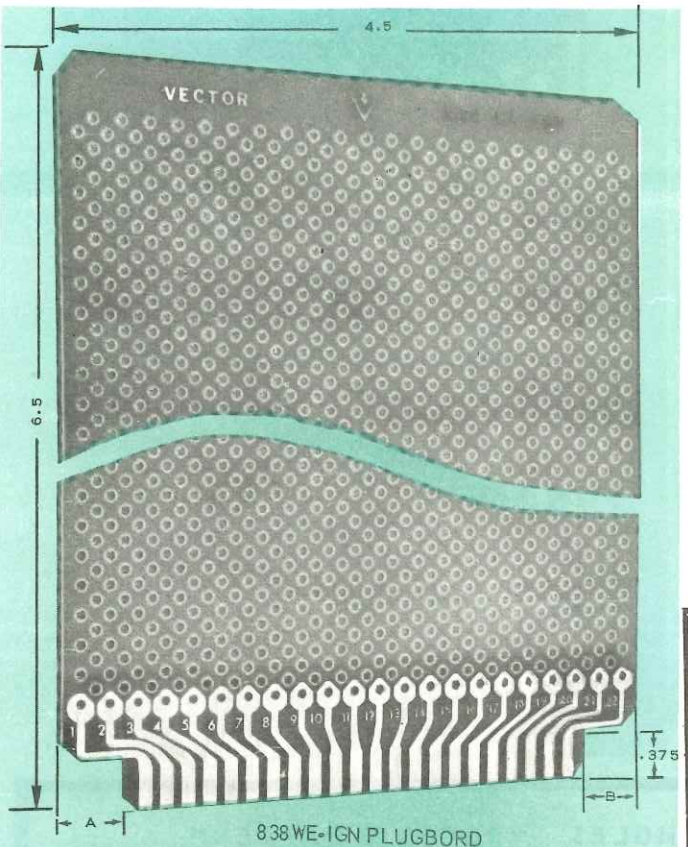
ORDERING INFORMATION

CAT. NO.	LGTH.	WDTH.	CONTACTS		MATER.	MATING †
	L	W	UPPER	LOWER		RECEPTACLE
842-120	6.5	4.5		20	EP	RW120-S OR P
842-120WE	6.5	4.5		20	WE	RW120-S OR P
842-241WE	6.5	4.5	21	20	WE	RW241-S OR P
856-112WE	4.5	3.0 ‡		12	WE	R112-S OR P
856-225WE	4.5	3.0 ‡	13	12	WE	R225-S OR P

† See mounting details and specification detail listed in Section IVA. For receptacles "S" suffix means solder tail and "P" means narrow tail to go in printed circuit hole.
Material: EP--Epoxy Paper, WE--Epoxy Glass.
Specifications: See Section IVA.

‡ If mounting in 3 1/2" Cage or EFP case is required this width can be cut down to 2.73".

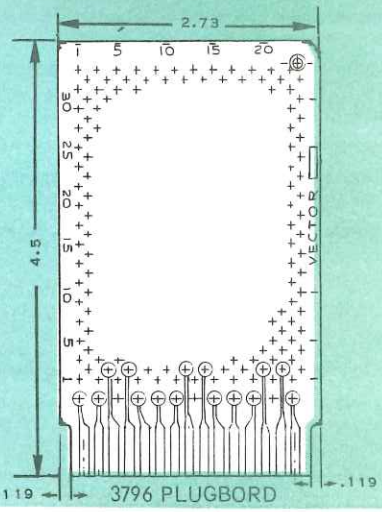
"G" PATTERN DISCRETE COMPONENT PLUGBORDS



838WE-IGN PLUGBORD

NOTE: BEVELED CORNERS SHOWN ON ILLUSTRATION WILL BE SUPPLIED AS STANDARD FROM PRODUCTION AFTER APRIL 1971.

CUT OF 838WE-IGNS PLUGBORD



3796 PLUGBORD

838 SERIES ETCHED CONTACT TYPE PLUGBORDS

These Plugbords have an overall grid of precision punched 1/16" diameter holes on alternate intersections of a 0.1" grid for optimum mounting of transistors and discrete components. The individual etched contacts are on .156" centers and are .090" wide on all boards listed below. On all versions except those with -1 Part Nos. the contact tongue is offset .050" from board center line. Contacts are numbered for easy identification. A chamfered leading contact edge assures smooth, easy entry into all types of P. C. receptacles.

All Plugbords listed fit standard printed circuit receptacles. Vector stocks double readout type printed circuit receptacles as R644 and R644-1 (see Sec. IVA) to mate with all P.C. type Plugbords listed below. These receptacles have 44 independent contacts in two rows with solder tab and wire wrapping tails, respectively.

For best connections to the individual etched contacts, a terminal or eyelet may be mounted in the hole in the "pad" at the end of the contact strip. When soldering component leads allow solder to flow onto the pad to make good contact with the contact strip.

Terminals available for this use are T28 series, T18, and T15.23 eyelets (see Sec. VII). Current rating for 10° C temp. rise is 3.5 amps. Special boards to customer specifications are available. Submit sketch and description to factory for quotation.

ORDERING INFORMATION

DIMENSIONS: ALL BOARDS LISTED ARE 4.5" X 6.5" X .062". CONTACTS ARE .090" WIDE ON .156" CENTERS. MATING RECEPTACLE: R644 SOLDER TAB, OR R644-1 WIRE WRAP.

CAT. NO.	CONTACTS FRONT	CONTACTS BACK	CONTACT FINISH	NOTCH DIM A	NOTCH DIM B	MATERIAL
838	22	22	TIN ALLOY	.408	.508	EP
838GN	22	22	NKL. GLD.	.408	.508	EP
838WE	22	22	TIN ALLOY	.408	.508	WE
838WEGN	22	22	NKL. GLD.	.408	.508	WE
838-1	22	22	TIN ALLOY	.458	.458	EP
838WE-1	22	22	TIN ALLOY	.458	.458	WE
838WE-1GN	22	22	NKL. GLD.	.458	.458	WE
838WE-1GNS	22	21	NKL. GLD.	.408	.508	WE
(THIS BOARD DOES NOT HAVE TERMINAL DESIGNATIONS ON CONTACT TABS).						
838A	22		TIN ALLOY	.408	.508	EP
838A-1	22		TIN ALLOY	.458	.458	EP
838AWE	22		TIN ALLOY	.408	.508	WE
838AWE-1	22		TIN ALLOY	.458	.458	WE
838AWE-1GN	22		NKL. GLD.	.458	.458	WE

MATERIAL: EP--EPOXY PAPER, WE--EPOXY GLASS,, FIRE RETARDANT

3796 SERIES ETCHED CONTACT TYPE 15 INDEPENDENT CONTACTS EACH SIDE

The 3796 Series Plugbord is similar to the above Plugbords except that it is a smaller version. Contacts are nickel plated and gold flashed, or tin alloy coated. 2 oz. copper (.0028") is used on 3796 and 1 oz. (.0014") on 3796-1. Current rating for a 10° C temp. rise is 4.5 amps on 3796, and 3 amps on 3796-1 version.

ORDERING INFORMATION

DIMENSIONS: 2.73" X 4.5" X .062". CONTACTS ARE .093" WIDE ON .156" CTRS. MATING RECEPTACLE: R630 HAS 15 INDEPENDENT CONTACTS EACH SIDE FOR SOLDER TAIL.

CAT. NO.	CONTACTS FRONT	CONTACTS BACK	FINISH	MATERIAL
3796	15	15	NKL. GLD.	EPOXY GLASS
3796-1	15	15	TIN ALLOY	PHENOLIC

Specifications: See Section IVA. Fire Retardant types used.

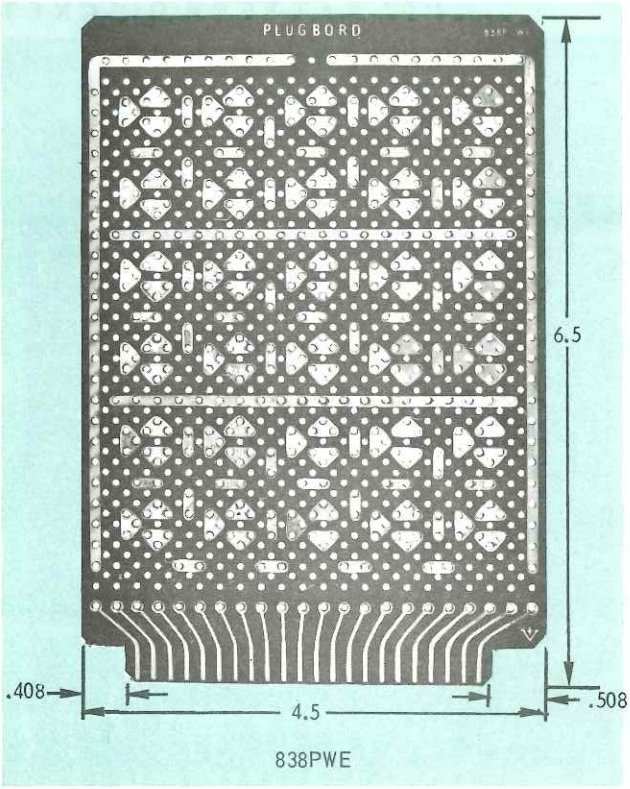
838PWE ETCHED TRANSISTOR PAD PATTERN

On the 838PWE Plugbord etched copper pads and lines are provided on one side around certain holes to facilitate soldering in component leads. Etched pads are solder coated to prevent corrosion.

The triangular pad pattern is especially useful for transistor leads since hole spacing matches JEDEC standard. Holes are .062" diameter on alternate intersections of 0.1" grid. The 22 printed plug tabs, on one side only, are on .156" centers and are offset .05" from center to aid in polarization. Thus receptacle should be mounted .05" off of center relative to plugbord.

Contact current rating for a 10° C. temperature rise is 4.5 amps.

Note: Beveled corners shown in illustration will be supplied as standard after April 1971.



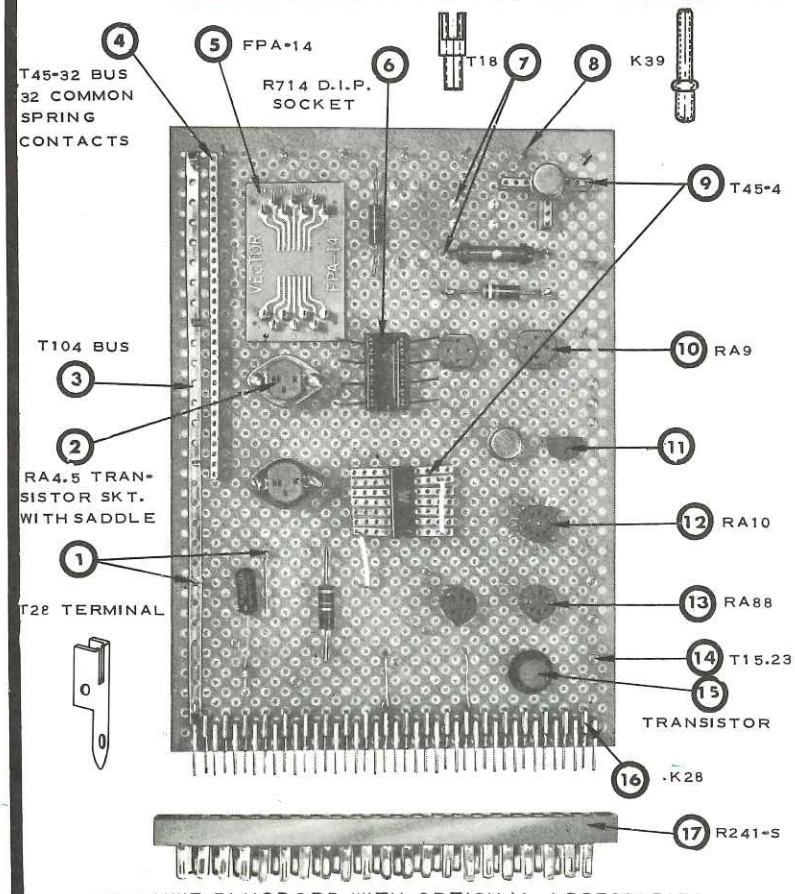
838PWE

ORDERING INFORMATION

CAT. NO.	NUMBER OF CONTACTS	MATERIAL	MATING RECEPTACLE
838P WE	22	EPOXY GLASS	R644 OR R644-1

Specifications: See end of Section.

ACCESSORIES TO FIT .062 DIAMETER HOLES - VECTOR G PATTERN

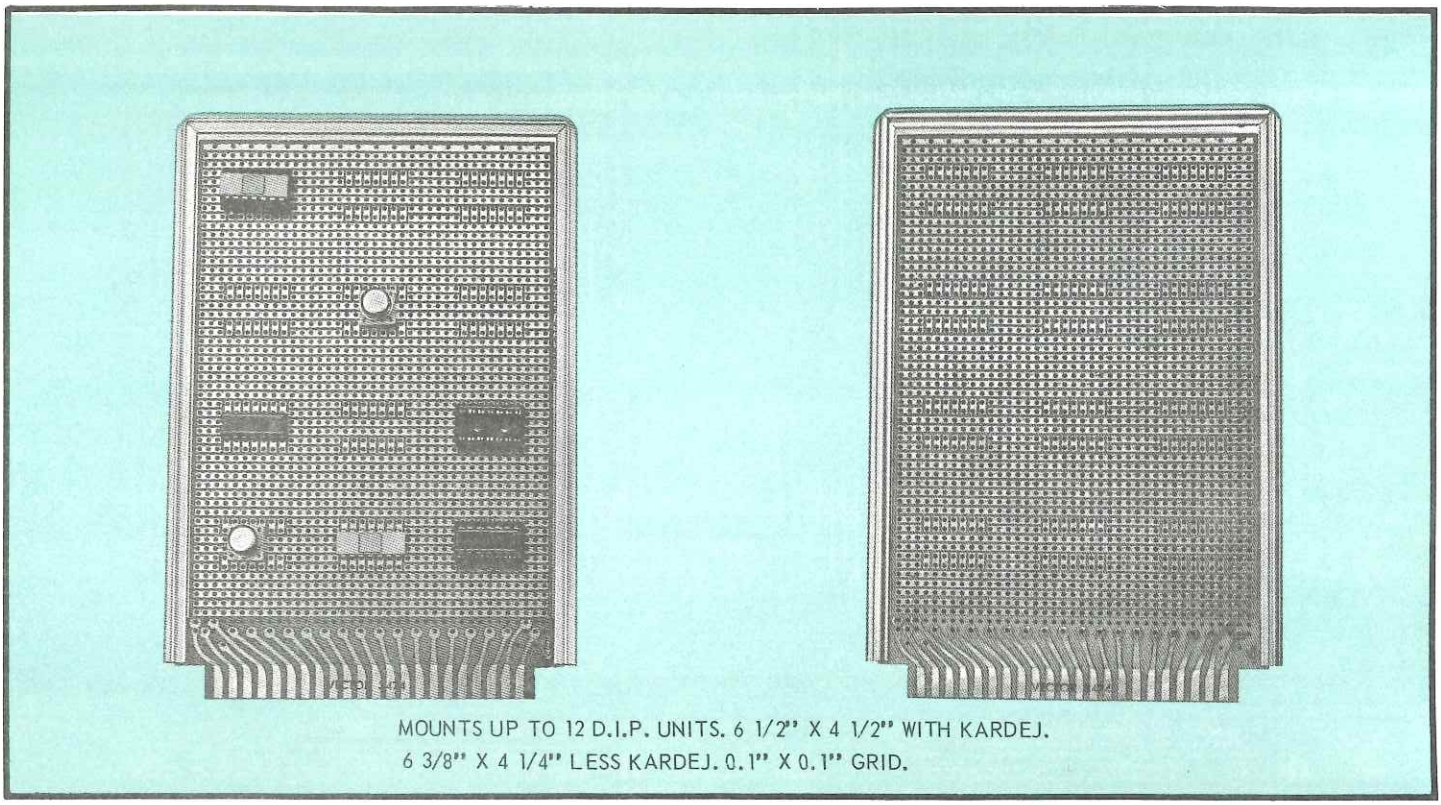


842-241WE PLUGBORD WITH OPTIONAL ACCESSORIES

1. T28 MINIKLIP TERMINAL. SEE SEC. VII, P. 3.
2. RA4.5 TRANSISTOR SOCKET WITH SADDLE. SEE SEC. IV-A, P. 8.
3. T104 BUS STRIP FOR SOLDERABLE BUSING. SEE SEC. IV, APPENDIX.
4. T45-32, 32 COMMON SPRING CLIP CONTACTS. SEE SEC. VII, P. 9.
5. FPA-14 FLAT PAK ADAPTER. USE WITH T15.23 EYELETS TO FIT .062 HOLES.
6. R714 D.I.P. SOCKET MOUNTS IN G PATTERN BY BENDING EVERY OTHER LEAD UP TO MATCH ALTERNATE HOLE PATTERN. SEE SEC. IV-A, P. 8.
7. T18 TERMINAL, SLOTTED TYPE, LOW PROFILE. SEE SEC. VII, P. 6.
8. K39C TEST POINTS MAY GO ANYWHERE ON PLUGBORD. SEE SEC. VII, P. 6.
9. T45-4 IMP CLIP. FOUR CONTACT INTERCONNECTED SPRING CLIPS FOR THROUGH THE BOARD SOLDERLESS CONTACTS. SEE SEC. VII, P. 9.
10. RA9 TRANSISTOR SOCKET. SEE SEC. IV-A, P. 8.
11. RA3.4 LOW PROFILE TRANSISTOR SOCKET. SEE SEC. IV-A, P. 8.
12. RA10 10-PIN ROUND SOCKET FOR I.C.'S, SEE SEC. IV-A, P. 8.
13. RA88 8-PIN ROUND SOCKET FOR I.C.'S. SEE SEC. IV-A, P. 8.
14. T15.23 EYELET. SEE SEC. VII, P. 4.
15. TRANSISTORS MOUNT DIRECTLY INTO G PATTERN.
16. K28 EJBORD PIN WITH HOLE TO ATTACH WIRES. FOR PIN AND SOCKET TYPE EDGE CONNECTORS. SEE SEC. IV-A, P. 5.
17. R241-S CONNECTOR. SEE SEC. IV-A, PP. 1-4.

VECTOR X-Y MATRIX D.I.P PLUGBORDS

PRE-PUNCHED HOLES FOR DIRECT INSTALLATION OF DUAL-IN-LINE PACKAGES



MOUNTS UP TO 12 D.I.P. UNITS. 6 1/2" X 4 1/2" WITH KARDEJ.
6 3/8" X 4 1/4" LESS KARDEJ. 0.1" X 0.1" GRID.

FIG. 1 3474 D.I.P. PLUGBORD

GENERAL

Vector D.I.P. Plugbords with pads for integrated circuits are designed for experimenters or small production jobs. These pre-punched, pre-etched, and plug tipped modified "x-y" matrix plugbords provide convenient and efficient means for quick connection of integrated circuit packages and associated components of the Dual-In -Line type.

Plugbord holes register with the Dual-In-Line tabs or sockets. See Sec. IVA, p. 8 for D.I.P. sockets with tabs which fit directly into the existing Plugbord holes. To insure a solid connection, the tabs of either the D.I.P.'s or the sockets may be readily soldered to the etched copper lines .070" wide, hole spacing 0.1". A solder coating is applied to copper lines to prevent corrosion, except at plug tabs which are nickel plated and gold flashed. The use of the socket with the D.I.P.'s ensures firm connection and provides quick means of changing the circuit.

Breaks are provided in the etched lines to ensure that D.I.P. tabs will not be shorted out. Parallel copper lines run in the "x" direction on one side of the Plugbord and in the "y" direction on the opposite side (except for plugbords having lines on one side only). In order to use the lines for interconnection Vector Inbord or other suitable pins are inserted when an "x" to "y" connection is desired. (The "y" connection runs the long way of the Plugbord. The "x" connection runs the short way of the Plugbord).

BREAKING THE MATRIX LINES.

The copper lines can be broken where required by means of line cutters so that a wide range of interconnections can be readily made. For connections which connot be readily made in this manner, the user may connect random wiring from point to point using the inserted pins. Soldering, welding, or conventional Wire-Wrap* may be used. Patching may be used to interconnect .040" diameter pins for experimental work by using available Vector contacts. The protruding pins also serve as convenient male test points.

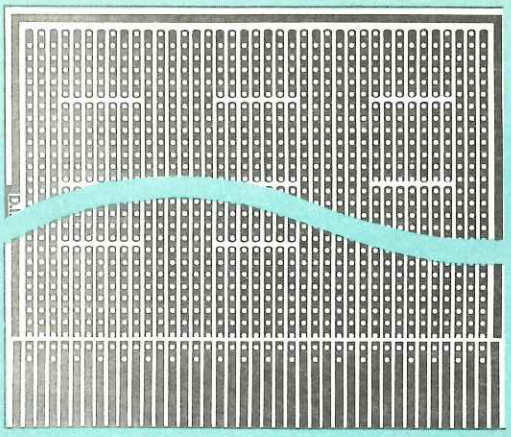
KARDEJ FRAME ADVANTAGES

Due to the large number of holes in the D.I.P. Plugbord KARDEJ aluminum frames are added for reinforcement. The KARDEJ, frames the plugbord and provides a "tongue" to slip into card guides and Vector-Pak Cases (See Sec. V and VI). Plugbords may be purchased with or without Kardej frames. 3719 Series is supplied without Kardej.

SPECIFICATIONS:

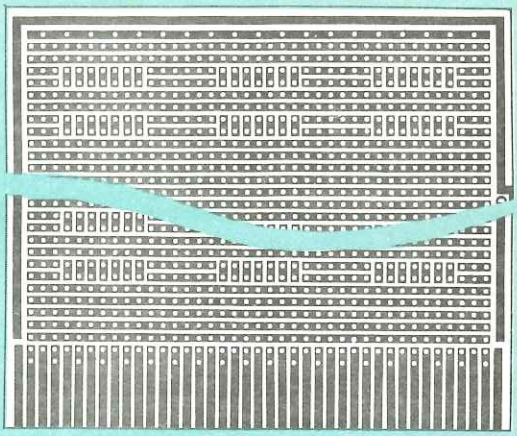
Insulation: Epoxy paper per MIL-P-13949D, FR3, Cream Color, 250° F. Max. Temp. Epoxy glass to special order.
Copper Cladding: 2 oz. (.0027" thk.) 1 or 2 sides. Solder coated except contacts.
Contacts: Printed circuit tabs, Varicon and Vector Ejbord Pin, contacts are nickel plated and gold plated.
Hole Pattern: Vector "P" Pattern, holes clear thru, 0.1" centers, .042" diameter.
Plug Types: Choice of (a) Printed Circuit Tabs .156" spaced, 22/44 Max. tabs or .1" spaced. 40/80 tabs, or 36/72 tabs; (b) Varicon, Double Tier, .1" spaced, 35 Max. blades; (c) Vector Ejbord Pin (.040" dia. pins), Double Tier, .1" spaced, 39 Max. Pins.
Frame: Aluminum KARDEJ for card reinforcement, warp elimination, labelling and for easier handling. Plugbords may also be ordered without frame.
Matrix Line Pattern: Etched copper lines .070" wide, spaced 0.1" in "x" direction one side of Plugbord and in "y" direction opposite side of Plugbord.

*TM Gardener Denver

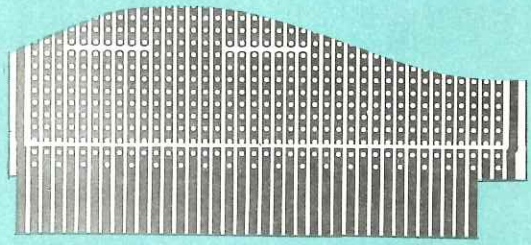


3477 Y MATRIX SIDE

FIG. 2

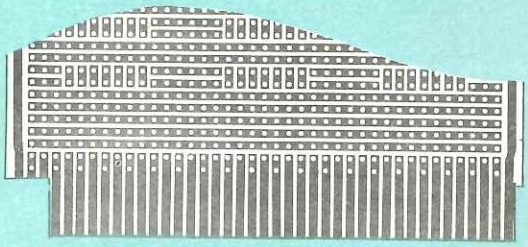


3477 X MATRIX SIDE



CUT OF 3477-7 Y MATRIX SIDE TO SHOW OFF CENTER NOTCHES. PLUGBORD IS IDENTICAL TO 3477 EXCEPT IT IS NOTCHED.

FIG. 3



CUT OF 3477-7 X MATRIX SIDE TO SHOW OFF CENTER NOTCHING. PLUGBORD IS IDENTICAL TO 3477 EXCEPT IT IS NOTCHED.

ABOVE BOARDS ENCASED IN KARDEJ- SIZE 4 1/2" X 6 1/2".

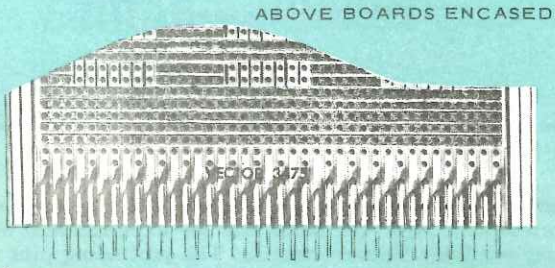


FIG. 4 CUT OF 3475 X MATRIX SIDE WITH 39 EJBORD PINS (Y MATRIX SAME AS 3477).

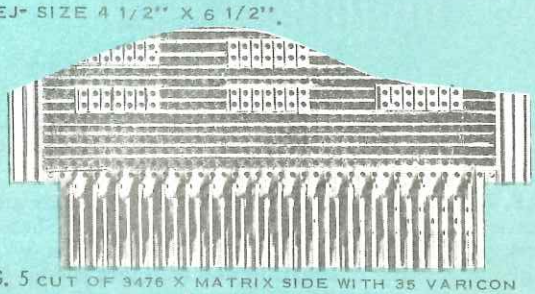
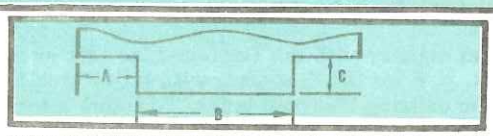


FIG. 5 CUT OF 3476 X MATRIX SIDE WITH 35 VARICON CONTACTS (Y MATRIX SAME AS 3477).

All Plugbords listed are 1/16" thick with an overall "P" Pattern of .042" dia. holes on 0.1" grid. All copper matrix patterns are solder coated. Contacts are nickel, gold plated.
EPOXY PAPER PLUGBORDS: Supplied with Kardej aluminum frame. Add "A" to Cat. No. (special order) if no Kardej desired. All boards listed are 4 1/2" x 6 1/2" with Kardej Frame. Without Kardej 3474 and 3476 Series are 4.23" x 6.37". For epoxy glass, to special order, contact factory.

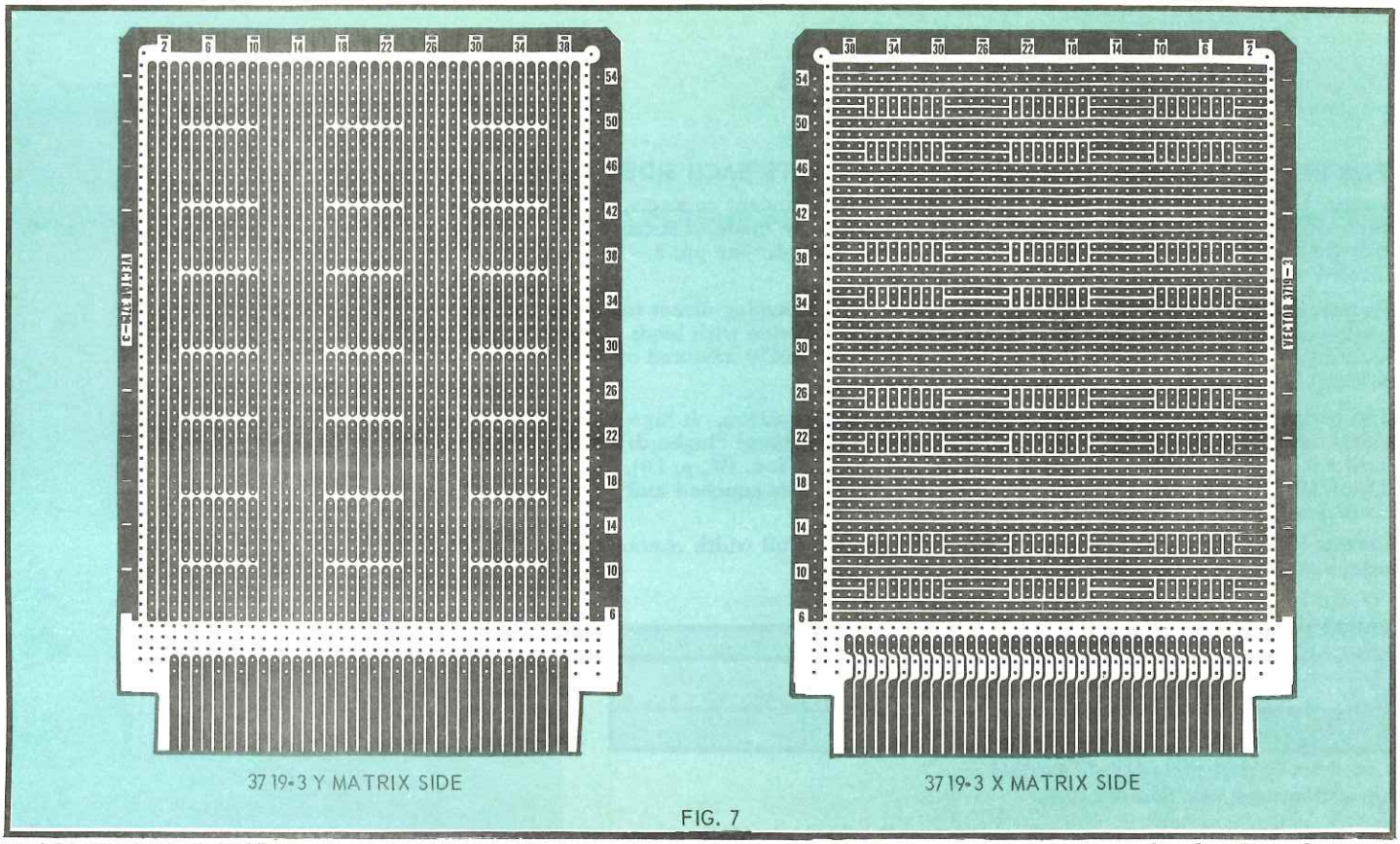
FIG. 6



DIMENSIONS PER FIG. 6 DO NOT INCLUDE KARDEJ; ADD .270 TO WIDTH FOR KARDEJ.

CAT. NO.	DESCRIPTION	NOTCH DIM. (SEE FIG. 6)			CONTACT TYPE	RECEPTACLE (SEE SEC. IVA)
		A	B	C		
3474	X-Y MATRIX PATTERN, 44 ETCHED CONTACTS (22 EA. SIDE) (FIG. 1)	.323	3.58	.375	44 .156" SPACED PC TABS, 22 EA. SIDE	R644 OR R644-1
3474-3	Y MATRIX WITH 22 CONTACTS EA. SIDE	.323	3.58	.375	44 .156" SPACED PC TABS, 22 EA. SIDE	R644 OR R644-1
3475	X-Y MATRIX PATTERN WITH 39 EJBORD PIN CONTACTS, (FIG. 4)	NO NOTCHES			39 VECTOR EJBORD PINS, DOUBLE TIER	RW241S, B60 GUIDES
3475-3	Y MATRIX ONLY, 39 EJBORD PINS	NO NOTCHES			39 VECTOR EJBORD PINS, DOUBLE TIER	RW241S, B60 GD.
3476	X-Y MATRIX PATTERN WITH 35 ELCO VARICON CONTACTS, (FIG. 5)	.265	3.70	.750	35 VARICON PINS, DOUBLE TIER	R635
3476-3	Y MATRIX BOARD WITH 35 VARICON CONT.	.265	3.70	.750	35 VARICON PINS, DOUBLE TIER	R635
3477	X-Y MATRIX BOARD WITH 82 ETCHED CONTACTS (FIG. 2) *	NO NOTCHES			82 0.1" SPACED PC TABS, 41 EA. SIDE	
3477-7	X-Y MATRIX PATTERN, 72 ETCHED CONTACTS (FIG. 3) *	.06	3.80	.475	72 .10" SPACED PC TABS, 36 EA. SIDE, OFF CENTER	R636
3477-8	Y MATRIX PATTERN, 36 CONTACTS *	.06	3.80	.475	36 .10" SPACED PC TABS, 1 SIDE, OFF CTR.	R636

* THESE PLUGBORDS HAVE PLUG CONTACTS WITH THRU HOLES COINCIDENT WITH COPPER LINES ON TWO SIDES (BUT NOT CONNECTING). IF THIS IS OBJECTIONABLE USE 3719 SERIES NEXT PAGE.



3719-3 Y MATRIX SIDE

3719-3 X MATRIX SIDE

FIG. 7

GLASS EPOXY PLUGBORDS: Following have no Kardej and are 4 1/2" x 6 1/2". Plug contacts are centered and independent on two sides.

CAT. NO.	DESCRIPTION	NOTCH DIMENSIONS (SEE FIG. 6)			CONTACT TYPE	RECEPTACLE (SEE SEC. IV A)
		A	B	C		
3719-2	Y MATRIX PATTERN, 1 SIDE, 72 ETCHED CONTACTS (TOTAL 2 SIDES)	.350	3.80	.530	36 TABS, .10" CENTERS EA. SIDE	R636
3719-3	X-Y MATRIX PATTERN, 72 ETCHED CONTACTS (TOTAL 2 SIDES) (FIG. 7)	.350	3.80	.530	36 TABS, .10" CENTERS, EA. SIDE	R636

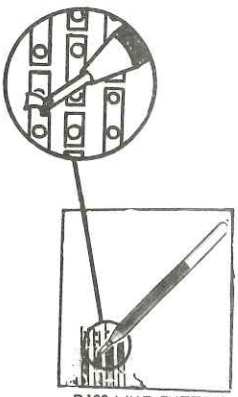
LAYOUT PAPER

Transparent Layouts of the "x" and "y" patterns in contrasting colors are available in packages of 12 for designing circuits for the D.I.P. Plugbords. It is recommended that designing be done directly on these sheets, but they can also be used as underlays. The actual circuitry can then be drawn on 0.10" coordinate grid paper.

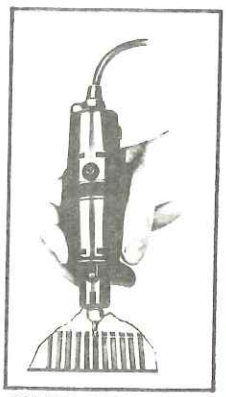
ORDERING INFORMATION

LAI-PX-1 LAYOUT PAPER FOR X SIDE OF NO. 3474 SERIES.
LAI-PY-1 LAYOUT PAPER FOR Y SIDE OF 3474 SERIES.
LAI-PX-2 LAYOUT PAPER FOR X SIDE OF NOS. 3475, 3476, 3477 SER.
LAI-PY-2 LAYOUT PAPER FOR Y SIDE OF NOS. 3475 & 3476 SERIES.
LAI-PY-3 LAYOUT PAPER FOR Y SIDE OF 3719 SERIES.
LAI-PX-3 LAYOUT PAPER FOR X SIDE OF 3719 SERIES.

LINE CUTTER TOOLS



P139 LINE CUTTER CHISEL



P141B ELECTRIC CUTTER

These provide a simple means for interrupting the matrix copper lines. Two kinds are available; (1) a "chisel" type and (2) an electric router type. The first is held in the hand and pushed across the copper line with a slightly oscillating motion to gouge out a break about .030" wide. The second type resembles a small electric drill having a special "router" tool which rotating at high speed cuts a break line about .030" wide. It is held in the hand and drawn across such portions of the plugbord as require copper removal. For precise work a special guide is furnished along which the main body of the tool can slide. Tool can also be used with appropriate accessories for drilling, grinding, sanding, and engraving. P141B is for line cutting and P141C is for general use. See also accessories at end of Section IV for further information.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION
P141B	ELECTRIC LINE CUTTER WITH 1/8" COLLET, COLLET WRENCH, ROUTER TOOL AND GUIDE.
P141A	ROUTER TOOL FOR ABOVE (SPARE) OR FOR USE IN DRILL PRESS.
P141D	3 EXTRA COLLETS SIZE 3/32", 1/16", & 1/32" AS ACCESSORIES FOR P141B
P141C	SAME AS P141B BUT LESS ROUTER TOOL AND GUIDE WITH 4 COLLETS: 1/8", 3/32", 1/16", AND 1/32".
P139	LINE CUTTER CHISEL. HAND TYPE

"P" PATTERN PLUGBORDS
.042" HOLES ON 0.1" GRID

FOR INTEGRATED AND DISCRETES 36 CONTACTS EACH SIDE

Vector 3719 Series "P" Pattern Plugbords offer 72 independent contacts, 36 each side, on 0.1" centers. These low cost Plugbords are made of strong Fire Retardant epoxy glass. No Kardej frame is furnished. See pp. 5 - 7 for X-Y matrix versions of the 3719 Series.

Prepunched holes are .042" diameter on 0.1" grid, facilitating direct insertion of D. I. P.'s and D. I. P. sockets, or any other device with leads located on 0.10" multiples. Discrete components are easily mounted on solderable and solderless terminals, or to holes.

The perimeter of the board is numbered for easy hole location. A high extraction force due to the large number of contacts on these Plugbords makes it desirable to use card ejectors (see accessories, Sec. IV, p. 16). The 3719 Series Plugbords are furnished with ejector holes punched and corners notched.

Current rating for a 10° temperature rise is 5 amps. on full width contact side, and 2 amps on thinned contact side.

ORDERING INFORMATION

DIMENSIONS: 4.5" X 6.5" X .062"				
CAT. NO.	CONTACTS		BOARD MATERIAL	MATING RECEPTACLE
	FRONT	BACK		
3719-1	36	36	EPOXY GLASS	R636

Contacts: Nickel plated, gold flashed.
Specifications: See Section IVA.

KARDEJ aluminum frames are added to some D.I.P. Plugbords to give reinforcement and to provide a "tongue" to slip into card guides and Vector-Pak Cases (Sec. V). For a complete description of KARDEJ see D.I.P. Matrix Plugbords or Appendix Pg. B.

VECTOR EJBORD PIN AND VARICON TYPE CONTACTS

These Vector "P" Pattern Plugbords are ideal for manual wiring or wire wrapping of integrated packages or other micro-circuits. Hole dia. of .042" on a 0.1" square grid allow direct insertion of Dual-In-Line tabs or sockets or other devices with leads on .1" multiples.

Vector Ejbord Pins and Varicons provide maximum contact reliability and are particularly recommended where vibration and hostile environmental conditions exist. (see Section IVA, Page 7.) For short production runs, hand wired Plugbords can often be made faster and less expensively than etched boards.

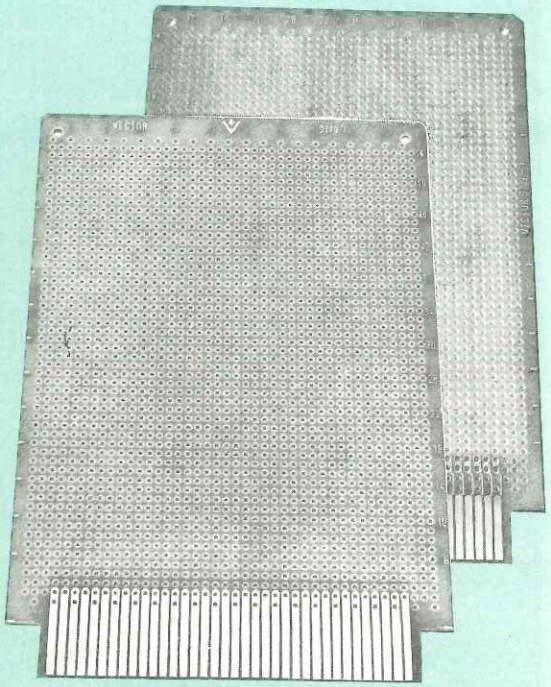
Plugbord accessories are available such as Vector's MP-2 Integrated Circuit (TO-5 type) Mounting Pads to spread round lead patterns to square ones (See Appendix Pg. A).

Contacts: Nickel plated, gold flashed.
Specifications: See Section IVA.

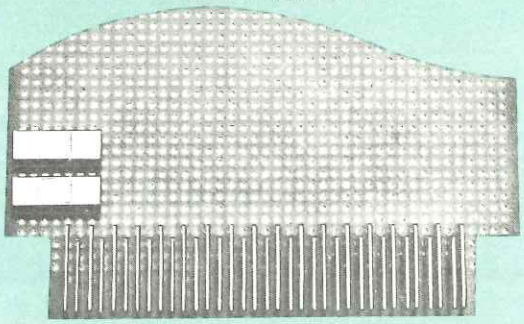
ORDERING INFORMATION

	DIMENSIONS: 4.5" X 6.5" X .062"				
CAT. NO.	CONTACTS 0.1" CTR.		BOARD MATERIAL	KARDEJ	MATING RECEPTACLE
	NO.	TYPE			
848PWE	35	VARICON	EPOXY GLASS	NO	R635
3475-2	35	EJBORD PIN	EPOXY PAPER	YES*	RW241-S
3476-2	35	VARICON	EPOXY PAPER	YES*	R635

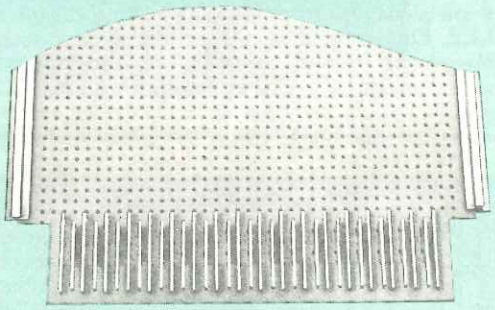
Contacts: Nickel plated, gold flashed.
*Add "A" to part number if no Kardej is desired. 3475-2 and 3476-2 are 4.23" x 6.17" x .062" without Kardej.
Specifications: See Section IVA.
*TM Elco Corp.



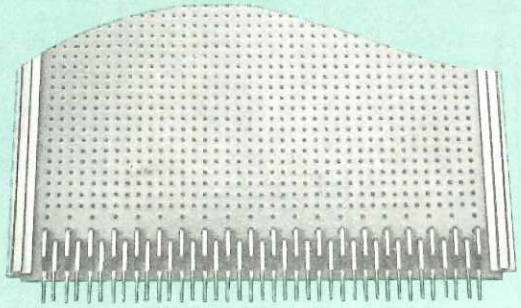
3719-1 PLUGBORD



848PWE PLUGBORD

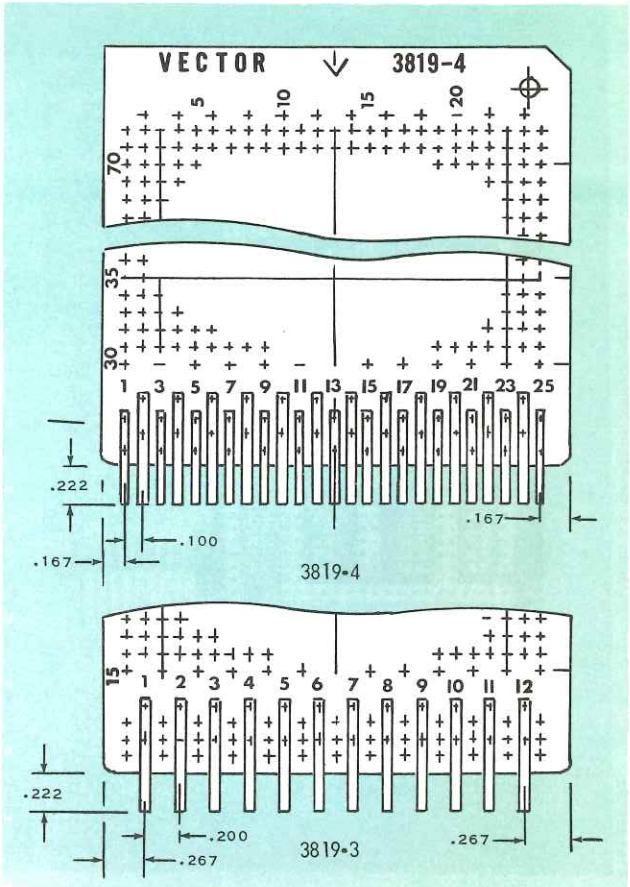


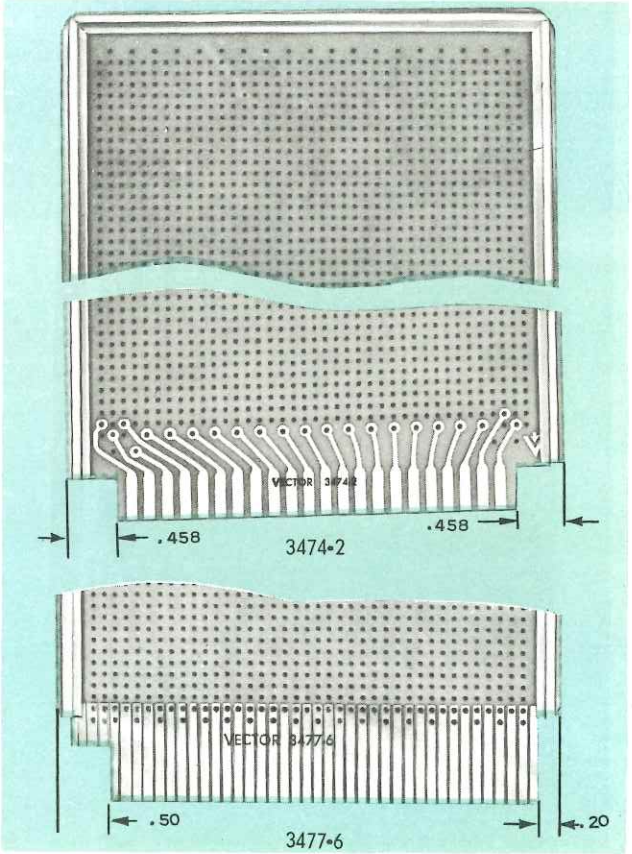
3476-2 PLUGBORD



3475-2 PLUGBORD

P PATTERN PLUGBORDS .042 DIAMETER HOLES ON 0.1 GRID





VECTOR EJBORD PIN TYPE CONTACTS
4.5 X 6.5 X .062 AND 2.73 X 4.5 X .062

These Plugbords are similar to the preceding 3475-2 Plugbord except in number of contacts and/or size, and these boards do not have Kardej frame. All Plugbords listed have Ejbord Pin type contacts and are recommended for maximum contact reliability where vibration and hostile environmental conditions exist.

Plugbords featured have either lower 0.2" centered, or upper and lower tier 0.1" centered Ejbord Pin contacts.

PLUGBORDS

ORDERING INFORMATION

CAT. NO.	L LENGTH	W WIDTH	CONTACTS NO.	CONTACTS TYPE	CONTACTS CTRS.	MATING RECEPTACLE
3819-1	6.5	4.5	20	LOWER	0.2	R120-S OR -P
3819-2	6.5	4.5	41	20 LOWER 21 UPPER	0.1	R241-S OR -P
3819-3	4.5	2.73	12	LOWER	0.2	R112-S OR -P
3819-4	4.5	2.73	25	12 LOWER 13 UPPER	0.1	R225-S OR -P

*RECEPTACLE SUFFIX "S" MEANS SOLDER TAIL AND "P" MEANS NARROW TAB TO GO IN PRINTED CIRCUIT HOLE.

Material: Epoxy Glass. Contacts: Nickel plated, gold flashed. Specifications: See end of section.

ETCHED CONTACTS .042 DIAMETER HOLES ON 0.1 GRID

These Plugbords are similar to the above but have etched contacts instead of solid plug contacts.

Plugbords with Vector "P" pattern holes provide maximum flexibility in component layout using any integrated circuit package or discrete component. Pre-punched .042" dia. holes on 0.1" grid register with D.I.P's, D.I.P. sockets and similar components. Round to square lead pattern adapters for round case transistors and I.C.'s are available to permit direct plug-in on "P" pattern Plugbords. See accessories in Section IVA.

Etched contacts located on both sides of Plugbord are nickel plated, gold flashed.

KARDEJ frames are added to the Plugbords listed for reinforcement due to the large number of holes. See previous description for Kardej included with X - Y matrix Plugbords. These Plugbords may be purchased without Kardej frames if desired by adding "A" to part number.

Current rating for a 10° C. temperature rise: 5 amps. for 3477-6, 3 amps. for 3474-2.

ORDERING INFORMATION

Contacts: Nickel plated, gold flashed. Board Material: Epoxy paper.

For Epoxy Glass Plugbords 4.5" x 6.5" x .062" without Kardej, see Sec. IV, p. 15.

CAT. NO.	CONTACTS FRONT	CONTACTS BACK	CONTACTS SPACING	MATING RECEPTACLE
3474-2	22	22	.156	R644 OR R644-1
3477-6	36	36	.1	R636

Specifications: See Section IVA.

P PATTERN PLUGBORDS 2.73 X 4.5 X .062 ON 0.1 GRID

VECTOR 3795 SERIES PLUGBORD - 22 INDEPENDENT ETCHED CONTACTS EACH SIDE

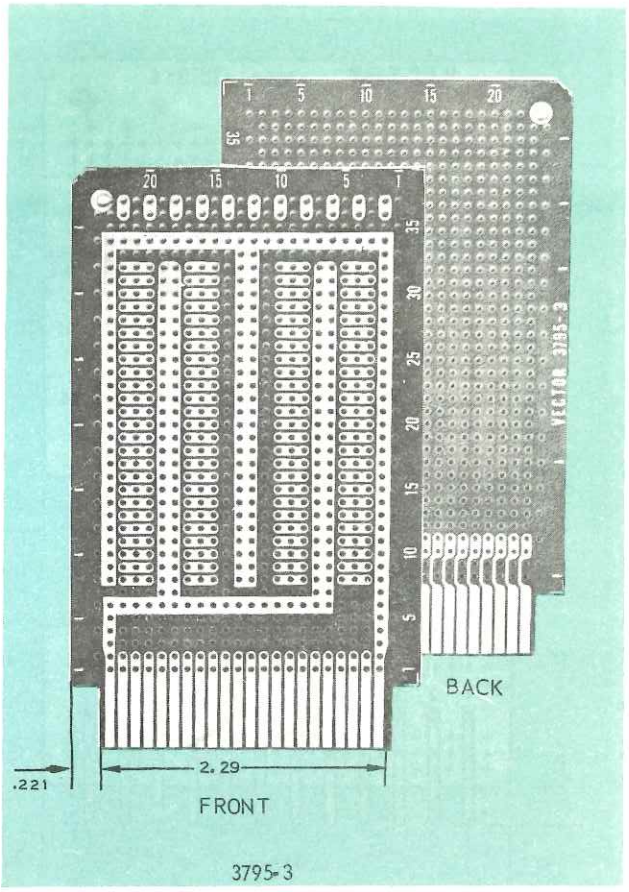
Provides Low Cost Universal Mounting For D.I.P. Devices

The 3795 Series "P" pattern Plugbord with 44 independent contacts (22 each side) on 0.1" centers is available in Gridbord version (fully etched grid of interleaved power and ground strips and solder pads), and in a version with etched contacts only.

The gridbord version is tin alloy coated for increased solderability and to prevent corrosion. Prepunched .042" holes on 0.1" centers allow direct insertion of six 14- or 16-pin D.I.P.'s or D.I.P. sockets in etched pad areas on the Gridbord version, and sixteen on the etched contact only version. Adapter mounting pads allow insertion of round can type I. C.'s or transistors in square grid pattern. See accessories in Sec. IV, Appendix. Simpler version having only etched contacts and no grid lines allows universal mounting of all types of discrete components. Tin alloy coated copper pads located at end of Gridbord version may be used for test points when a terminal pin is inserted or for discrete components. See more complete description of larger version 3677 Series plugbord later in this Section.

Card extraction force is not high; however, an ejector notch and hole are provided for user to mount a card ejector. See card ejectors in Sec. IV, Appendix.

Current rating for 10° C. temperature rise is 5 amps. for full width contacts, 2 amps. for thinned out contacts on epoxy glass board; and 4 amps. for full width contacts, and 1.5 amps. for thinned contacts on phenolic boards.



3795-3

ORDERING INFORMATION

Dimensions: 2.73" x 4.5" x .062", see illustration at right for notching dimensions.
Mating Receptacle: R644-2 wire wrapping type.

CAT. NO.	ETCHED GRID	CONTACTS 0.1 CENTERS			BOARD MATERIAL
		FRONT	BACK	PLATING	
3795	NO	22	22	NKL GLD	EPXY GLASS
3795-1	YES	22	22	NKL GLD	EPXY GLASS
3795-2	NO	22	22	TIN ALLOY	PHENOLIC
3795-3	YES	22	22	TIN ALLOY	PHENOLIC

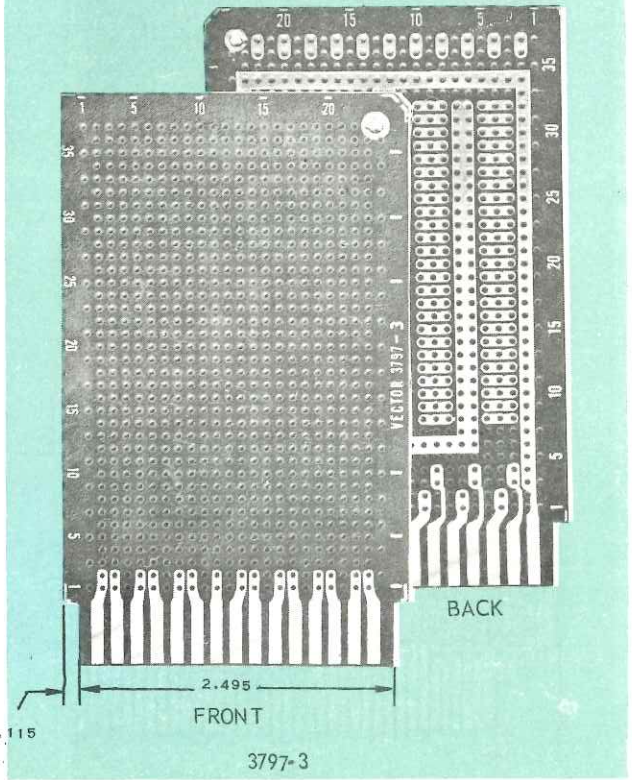
Specifications: See end of section.

VECTOR 3797 SERIES PLUGBORD - 15 INDEPENDENT CONTACTS EACH SIDE

Provides Low Cost Universal Mounting For D.I.P.'s And Discretes

The 3797 Series "P" pattern Plugbord is similar to the 3795 Series above except that it has only 30 contacts (15 each side) on .156" centers. Prepunched .042" dia. holes are on 0.1" centers.

Current rating for 10° C. temperature rise: Epoxy Glass - 5 amps. on full width contacts, 2.5 amps. on thinned out contacts. Phenolic - 3.5 amps. on full width contacts, 1.5 amps. thinned out contacts.



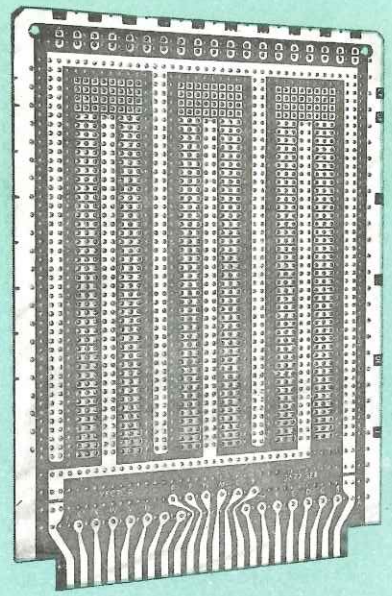
3797-3

ORDERING INFORMATION

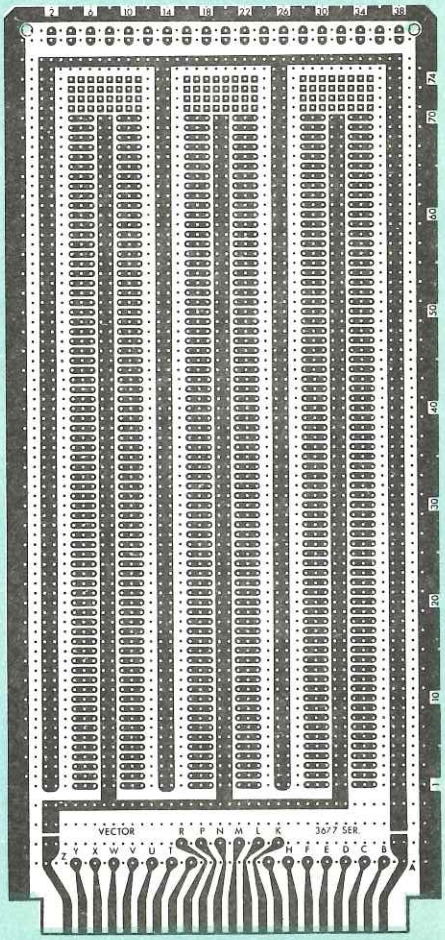
Dimensions: 2.73" x 4.5" x .062", see illustration at right for notching dimensions.
Mating Receptacle: R630 with solder tab tail.

CAT. NO.	ETCHED GRID	CONTACTS .156 CENTERS			BOARD MATERIAL
		FRONT	BACK	PLATING	
3797	NO	15	15	NKL GLD	EPXYGLASS
3797-1	NO	15	15	TIN ALLOY	PHENOLIC
3797-2	YES	15	15	NKL GLD	EPXY GLASS
3797-3	YES	15	15	TIN ALLOY	PHENOLIC

Specifications: See end of section.



3677-2 D.I.P. PLUGBORD, FRONT VIEW, SHOWING TINNED BUSES.



3677 D.I.P. PLUGBORD-HALF SCALE SIDE 1 WITH P.C. PATTERN. 3677-2 HAS ONLY 39 LINES OF OVAL PADS.

VECTOR 3677 SERIES PLUGBORD

PROVIDES UNIVERSAL MOUNTING FOR:

- DUAL-IN-LINE PACKAGES
- INTEGRATED CIRCUITS
- FLAT PACKS
- TRANSISTORS
- DISCRETES

The 3677 Series Plugbord is available in three versions: The 3677 is 9.6" long x 4.5" wide with Side One and Side Two as illustrated. Side One of 3677-1 is identical to 3677, but Side Two is blank (no screening, no contacts). 3677-2 is a 6.5" long x 4.5" wide version of 3677, with 39 lines of oval pads. As many as 24 D.I.P. units having 14 leads or 21 units having 16 leads can be mounted (with the longer size).

INTERLEAVED BUS STRIPS

Access to ground and voltage is furnished by bus strips which are interleaved between pad areas. Nineteen pairs of pads suitable for test points or component mounting are provided along the back edge of the board with .042" diameter holes in and also between the pads. Two .1" diameter holes are provided for attaching card ejectors or nylon pull cords at one end of the board. Printed circuit pattern containing 96 individual pads is provided on Side 1 (see illustration) to facilitate mounting of TO-5 and TO-18 type transistors and round case integrated circuits. Lead forming mounting pads are available to transform circular lead patterns to rectangular patterns, Vector Part Nos. MP-1 or MP-2. All pads may be used independently of busses or connected in as required. Thus round integrated circuits using 8, 10 or 12 leads may be easily mounted in this area. They may also be mounted in other areas if copper lines are cut as required by using Vector line cutter tools, such as P139 (manual) or P141B (electric). See Section IV, Page 7.

Use of sockets in the board (see accessory list) allows freedom of circuit change and repeated modifications without exposing sensitive components to excessive heat from soldering.

COATED FOR IMPROVED SOLDERABILITY

All circuitry, with the exception of contact areas, is solder coated to improve solderability. Twenty-two tabs per side printed circuit contacts are provided on standard .156" centers and may be used independently or paralleled as preferred on the 3677 and 3677-2 Plugbords; twenty-two tabs one side only on the 3677-1 and 3677-3.

Side 2 of the Plugbord (see illustration) is provided with a silkscreened legend showing bus locations and numerical edge positions to facilitate component installation.

PUSH-IN TERMINALS AND PINS

Component mounting is facilitated by use of Vector Micro-Klips (T42-1) and and Vector Inbord Pins (K24C, etc.) pushed into existing hole patterns. Use of solder-thru insulation "Belsol" wire, Vector Part No. 2323A-32-2, permits crossovers without shorts to unlimited extent without having to strip the wire.

LENGTH CAN BE CUT DOWN

The 3677 version incorporates all features noted on preceding page with a length of 9.6" allowing maximum use of card space, whereas the 3677-2 is similar but with 6.5" length. The 3677-1 is identical to 3677 except that Side Two is blank. All are 4.5" wide but may be trimmed down to 4.23" without detriment to the printed circuitry. This will permit use with reinforcing aluminum "Kardej". Modification of the length of either basic size may be made without impairing the overall function of the circuit. Simply cut off from back edge to required length and install Vector Bus Strip T107 with T16.13 Eyelets on component side to replace cut away etched bus strips (see Fig. 1, below)

GRID PAPER FOR ADVANCE LAYOUT

Planning and advance layout of circuit prior to actual circuit assembly may be performed on Vector layout paper. The completed Plugbord may be easily installed in a standard Vector-Strut Card Cage or standard Vector-Pak aluminum case to provide an attractive finished package (see Vector Catalog Section V).

SPECIFICATIONS

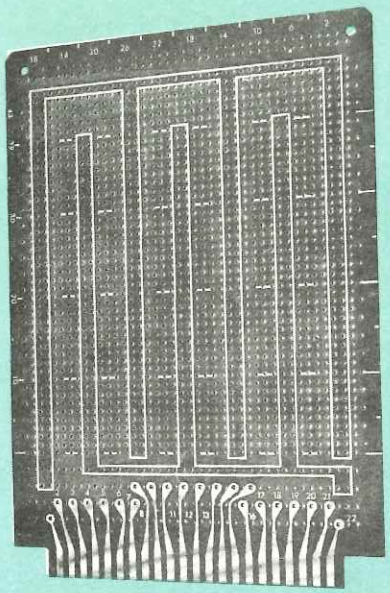
MATERIAL: 2 oz. copper clad, on 2 sides of flame retardant .062" thk. Epoxy Glass Laminate per Mil-P-13949.
CONTACTS: Printed Circuit, .156" centers, 22 each side on 3677 and 3677-2, 22 one side on 3677-1. Contacts are plated with .00003 nickle per QQ-N-290, under .00002 min. Gold per Mil-G-45204.
Other Copper: Flowsolder Coating.

ORDERING INFORMATION

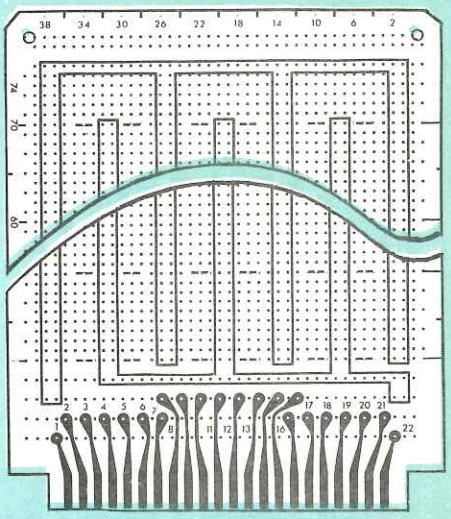
CAT. NO.	LENGTH	WIDTH	PLUG CONTACTS & DESCRIPTION
3677	9.6	4.5	PRINTED CIRCUIT 44 (22 EACH SIDE)
3677-1	9.6	4.5	PRINTED CIRCUIT, 22 SIDE ONE
3677-2	6.5	4.5	PRINTED CIRCUIT 44 (22 EACH SIDE)
R644	--	--	RECEPTACLE FOR ABOVE CARDS 44 CONTACTS (22 EACH SIDE)
3677-3	6.5	4.5	PRINTED CIRCUIT, 22 SIDE ONE
LA2P1	11	8½	LAYOUT PAPER FOR 3677 & 3677-1
LA2P2	11	8½	LAYOUT PAPER FOR 3677-2

ACCESSORIES

PRODUCT:	SECTION(S)	PAGE(S)
Kardej Frame	IV	Appendix Page B
T107 Bus Strip	IV	Appendix Page C
Inbord Pins	VII	7, 8
T42-1 Micro-Klips	IV	Appendix Page A
K32 "J" Pin	VII	8
P139 Tool	IV	7
P141B Tool (Electric)	IV	7
Vector-Pak Cases	V	10-14
FPA-14 Flat-Pak Adapters	IX	14
DIP Sockets, 14 Pin	IVA	8
DIP Sockets, 16 Pin	IVA	8
Adapter Wafers for 8-, 10-, 12- Pin Round ICP	IV	Appendix Page A
Transistor Sockets	IVA	8
Sockets for 8- Pin ICP	IVA	8
Sockets for 10- Pin ICP	IVA	8



3677-2 D.I.P. PLUGBORD, BACK VIEW.



3677 D.I.P. PLUGBORD-HALF SCALE SIDE 2 (SEE PAGE 11 FOR SIDE 1). BUS POSITIONS SCREENED IN WHITE INK. CONNECTOR ONLY IS COPPER.

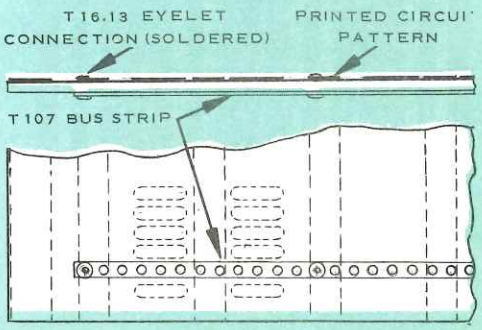
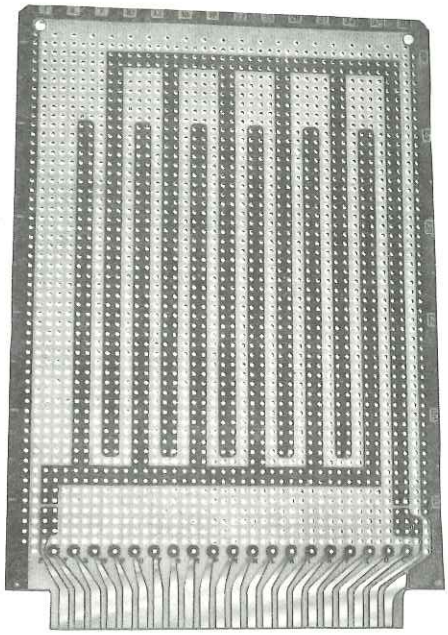


FIG. 1. MODIFICATION OF LENGTH OF 3677 SERIES CARD WITH USE OF BUS STRIP ON REVERSE SIDE OF CARD.



3682-2 AND 3682-4 D.I.P. PLUGBORD FRONT VIEW. SHOWING ETCHED CONNECTOR, POWER, AND GROUND BUS.

PROVIDES UNIVERSAL MOUNTING ESPECIALLY FOR:

- WIRE-WRAP D.I.P. INTEGRATED & RELATED UNITS
- HIGH COMPONENT DENSITY
- EASY CHANGING AND ACCESSIBILITY
- PRODUCTION, PROTOTYPE OR BREADBOARD

TYPES AVAILABLE

Plugbords are 4 1/2" wide and either 9.6" or 6.5" long and are filled with .042" diameter holes on .1" centers. One side carries power and ground bus strips (interleaved) and 22 plug tabs, spaced 0.156" along shorter dimension. Ink screening on rear side denotes line numbers and bus positions. Also 22 copper plug tabs are etched on rear side making 44 total. Another version of the 6.5" length type is available with a copper ground plane on rear side which has etched clearance space around each punched hole.

MOUNT UP TO FIFTY-FOUR D.I.P. SOCKETS

Power and ground strips are interleaved between hole positions where wire wrap terminals of D.I.P. sockets are intended to be inserted. Lines of "free holes" spaced 0.3" extend in the long direction of the boards. Either 14-or 16-pin sockets may be used. Six lines of such sockets can be mounted, permitting 54 14-pin sockets or 48 16-pin sockets on the 9.6" long version. Other integrated units having a multiple of 0.3" lead spacing could be similarly mounted.

AREAS FOR TO-5 AND TO-18 TYPE UNITS

Near the top and along one side a series of "free holes" are located into which round type integrated transistors and discrete components can be mounted. Such units can also be mounted at other areas of the board if Vector pad or line cutters are used (see Sec. IV, Appendix Page C) to create isolated copper pads.

TEST POINTS

Two rows of holes are provided near the top of the board for .040" diameter test points. (See Sec. VII, P.7, for pins.)

COATED FOR IMPROVED SOLDERABILITY

Copper areas with exception of plug contacts are solder coated for ease of connection where wire wrapping is not used.

STANDARD RECEPTACLES

22 contacts per side (44 total) printed circuit receptacle No. R644 is available to match the gold plated printed plug tips. Standard terminal numbering is used.

PUSH-IN TERMINALS, PINS AND "DAISY-CHAIN" PATCH CORDS

Component mounting, additional to wire wrap sockets, is facilitated by the use of T42-1 Micro-Klips (see Sec.IV, App.) and associated K32 wire wrap pins (see Sec. VII, P. 8). Additionally the new Vector T44 Miniwrap Terminals for wire wrapping Vector Inbord Pins, K24C, etc., (see Sec. VII, pp. 7,8) are also useful for these boards.

SOLDERING INSTEAD OF WIRE WRAPPING

The 3677 series Plugbord is generally preferred for "all soldered" connections. The 3682 may also be used similarly but with a higher component density by employing solder thru insulated "Belsol" wire, Vector Part No. 2323A-32-2 which can be wrapped around the posts and carried point to point without fear of "shorts" or having to strip insulation off wire. After wire wrapping a much thinner package can be obtained by clipping off the unnecessarily long wrap posts.

BOARD LENGTH CAN BE CUT DOWN

Modification of the length of either basic size may be made without impairing the overall function of the circuit. Simply

cut off from back edge to required length. On the 3682 and 3682-2 install Bus Strip T107 with T16.13 Eyelets on component side to replace cut away etched bus strips (see Fig. 1, Page 12). Type 3682-4 has a ground plane on component side and can be eyeletted thru board to any position. All boards are 4.5" wide but may be trimmed down to 4.23" without detriment to the printed circuitry. This will permit use with reinforcing aluminum "Kardej" (see Sec. IV, Appendix), or in narrower card cages.

GRID PAPER FOR ADVANCE LAYOUT

Planning and advance layout of circuit prior to actual circuit assembly may be performed on Vector layout paper or on wire wrap schedule sheets. The completed Plugbord may be easily installed in a standard Vector-Strut Card Cage or standard Vector-Pak aluminum case to provide an attractive finished package (see Vector Catalog, Section V).

PATCH CORDS FOR EXPERIMENTING

"Daisy-Chain" slip-on contacts which fit .025" square terminals are available per Sec. IV, Appendix.

SPECIFICATIONS

MATERIAL: 2 oz. copper clad, on 2 sides of flame retardant .062" thick Epoxy Glass Laminate.

CONTACTS: Printed Circuit, .156" centers, 22 each side, 44 total. Contacts are plated with nickle per QQ-N-290, and Gold per Mil-G-45204.

Other Copper: Flowsolder Coating.

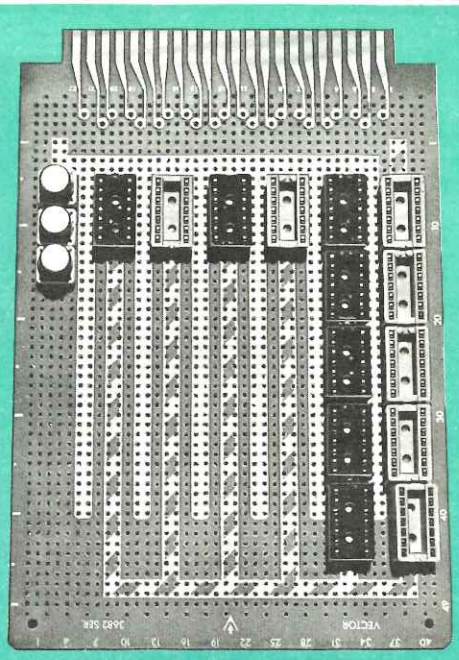
ORDERING INFORMATION

CAT. NO.	LENGTH	WIDTH	PLUG CONTACTS & DESCRIPTION
3682	9.60	4.5	PRINTED CIRCUIT 44 (22 EACH SIDE, .156" CENTERS)
3682-2	6.49	4.5	PRINTED CIRCUIT 44 (22 EACH SIDE, .156" CENTERS)
3682-4	6.49	4.5	AS 3682-2 EXCEPT WITH COPPER GROUND PLANE ON REAR ABOVE & ISOLATED FROM CONTACT AREA
R644			RECEPTACLE FOR ABOVE CARDS, 44 CONTACTS (22 EACH SIDE WITH SOLDER TABS).
LA3P1			LAYOUT PAPER FOR 3682
LA3P2			LAYOUT PAPER FOR 3682-2, 3682-4

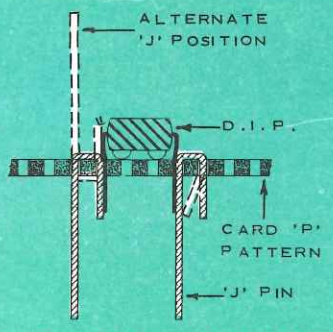
ACCESSORIES

SAME AS LISTED ON BOTTOM OF PAGE 22 FOR 3677 UNIT BUT WITH ADDITION OF FOLLOWING:

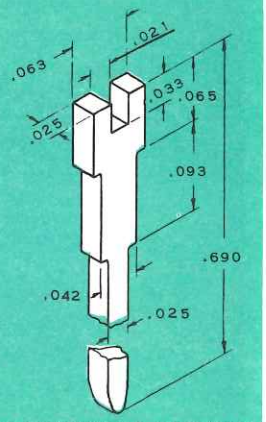
		SEC.	PAGE
T44	MINIWRAP TERMINAL	VII	8
T120-1	" DAISY-CHAIN " PATCH CORD, CONTACTS SPACED 5" ON # 26 INSULATED WIRE FIT .025" SQ. POSTS. REELS OF 50	IV	APP.
0085-42-15	DOUBLE BACKED RUBBER COMPONENT MTG. TAPE (2 SIDED ADHESIVE), 18" LONG	IX	16
FPA-14	FLAT PACK ADAPTER	IX	16
FA2	RETAINER FOR R714 D.I.P. SOCKET	IX	14
FA3	RETAINER FOR R716 D.I.P. SOCKET	IX	14



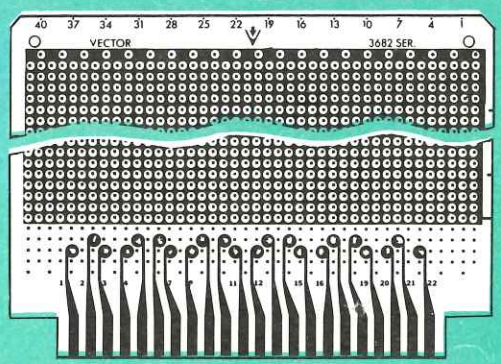
3682-2 D.I.P. PLUGBORD. BACK VIEW WITH BUS POSITIONS SCREENED IN WHITE INK.



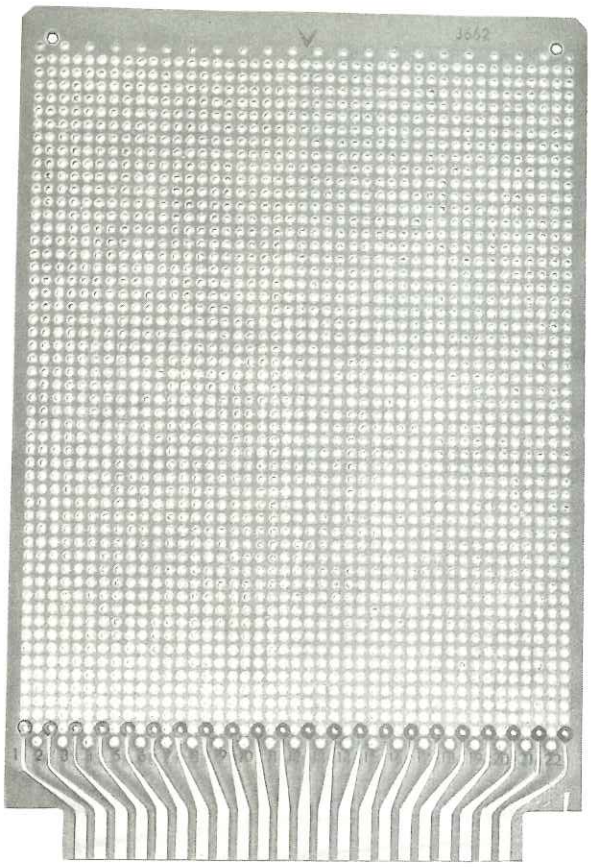
SHOWING J-PIN USED TO ADD WIRE WRAP.



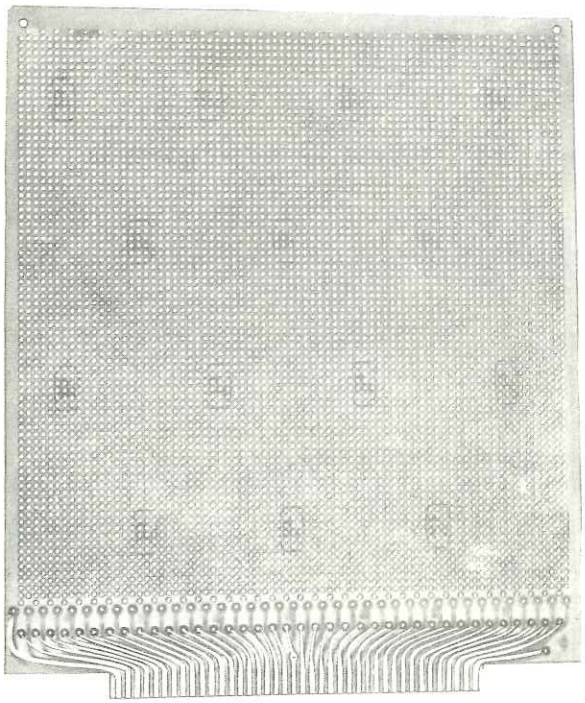
T44 MINIWRAP TERMINAL FOR WIRE WRAPPING.



3682-4 D.I.P. PLUGBORD WITH GROUND PLANE, BACK VIEW. ETCHED AREA AROUND HOLES ASSURES LEAD ISOLATION.



3662 D.I.P. PLUGBORD
4.5" X 6.5" X 1/16"



3673 D.I.P. PLUGBORD
9.6" X 7.88" X 1/16"

PLUGBORDS FOR INTEGRATED CIRCUITS AND DISCRETE COMPONENT MOUNTING

"P" Pattern Plugbords provide maximum flexibility in component layout using any integrated circuit package or discrete component. Pre-punched grids in 1/16" epoxy glass Vector "P" Pattern with .042" diameter holes on .1" x .1" centers register with D.I.P.'s, D.I.P. sockets and similar components. Adapters (see accessories) for TO-5 and TO-18 round case transistors and I.C.'s and for flat packs are available to permit plug-in on "P" Pattern grid. Two holes are provided for attaching Vector No. HA9 Card Ejectors described on overleaf.

FEATURES GROUND CONTACT

Plugbord No. 3662, which measures 4.5" x 6.5", features 22 numbered contacts on the front which correspond to the mating receptacle, Vector No. R644 (see Sec. IVA, p.6). The reverse side has 21 lettered contacts, plus a grounding contact. The epoxy glass board fits the 5 1/4" Vector-Strut Cage and HF and EFP aluminum modules (see table on Sec. V, p.10, for Part Nos.). Plugbord contacts are copper, nickel, and gold plated on .156" centers. No. 3662-1 is identical to 3662 except that it is phenolic with copper, tin alloy coated contacts.

LARGE AREA PROVIDED

Plugbord No. 3673 has 80 (40 per side) gold over nickel plated contacts on .125" centers. The 9.6" x 7 7/8" board provides a large area to allow greater quantities of components to be mounted. This Plugbord fits the 8 3/4" Vector-Strut Cage. This series mates with Methode 93-6080-1100-00 or Viking 2VH40/1CND3 Receptacles (order from manufacturer).

ACCESSORIES

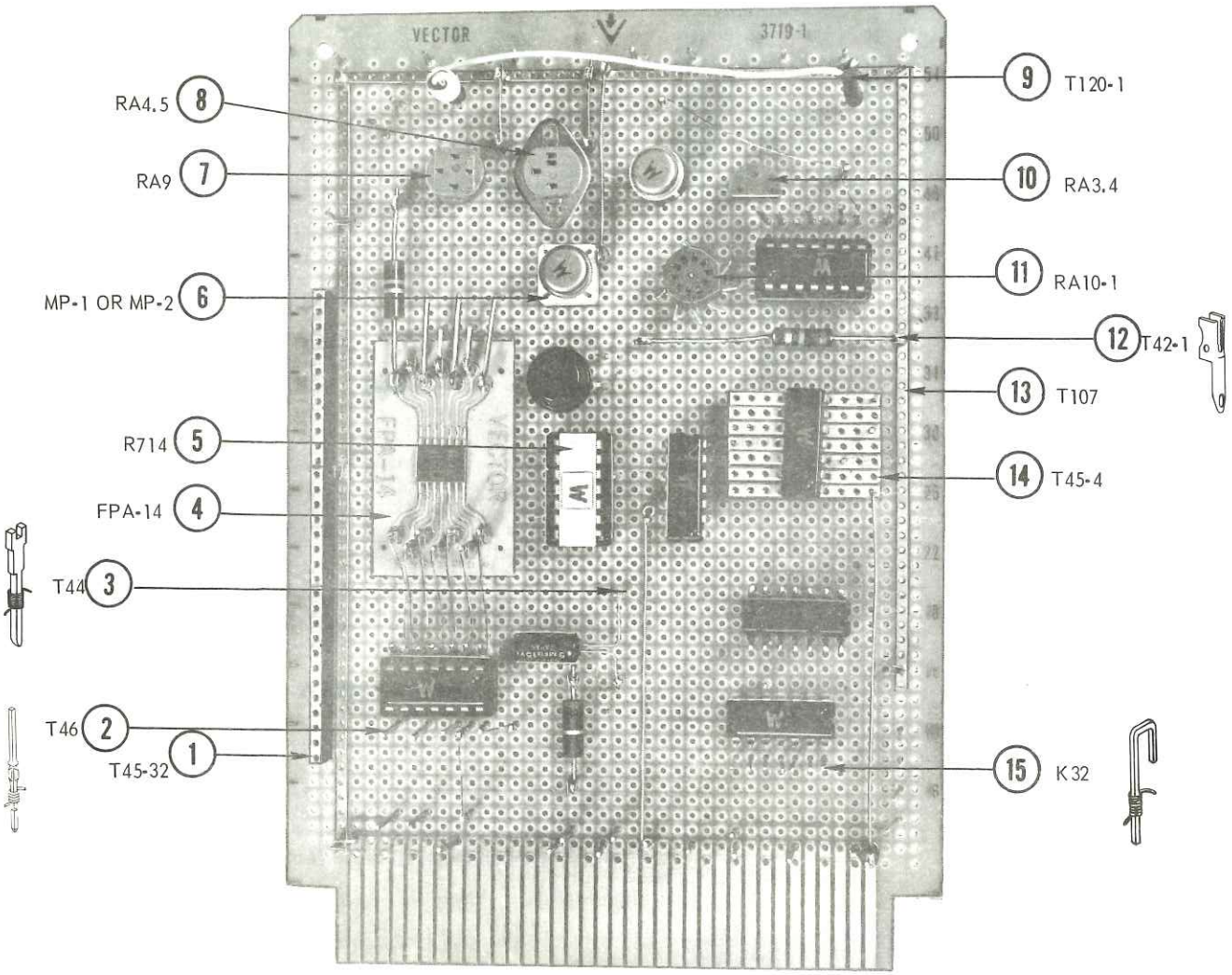
For accessories for both D.I.P. Plugbords see Appendix to this section.

SPECIFICATIONS

Material: Epoxy glass per Mil-P-13949 for 3662 and 3673.
Phenolic per NEMA Grade FR-2 for 3662-1.
Contact Plating: Gold over nickel for 3662 and 3673;
tin alloy coated for 3662-1.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	MATING RECEPTACLE
3662	6.5" X 4.5" X 1/16" EPOXY GLASS PLUGBORD WITH 44 ETCHED PLUG CONTACTS.	R644 OR R644-1
3662-1	SAME AS 3662 EXCEPT PHENOLIC.	R644 OR R644-1
3673	9.6 X 7.88 X 1/16 EPOXY GLASS PLUGBORD WITH 80 ETCHED PLUG CONTACTS	METHODE 93-6080-1100-00 VIKING 2VH40/1 CND3

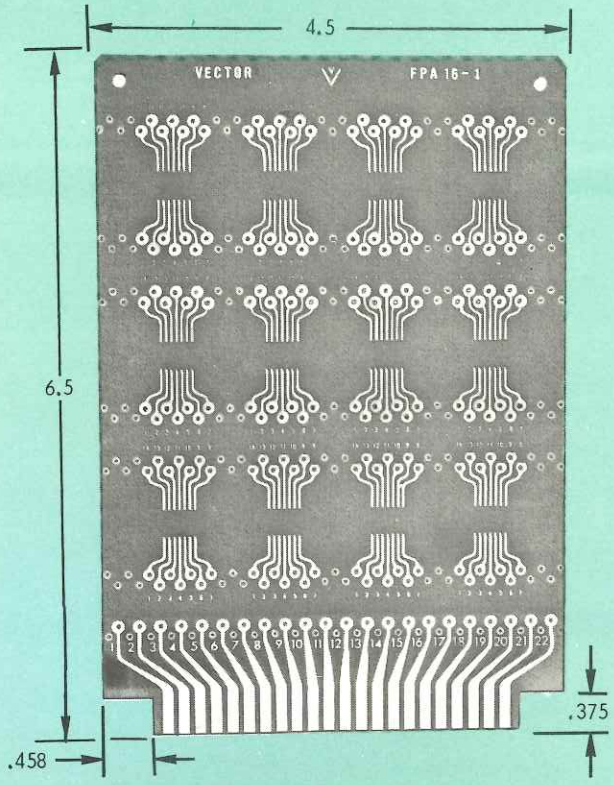


3719-1 PLUGBORD, FRONT VIEW, WITH OPTIONAL ACCESSORIES

ACCESSORIES TO FIT .042 DIAMETER HOLES - VECTOR P PATTERN

ITEM	CATALOG NO.	DESCRIPTION
1.	T45-32	IMP CLIP BUS STRIP, SOLDERLESS SPRING CLIP TERMINALS. SEE ALSO ITEM 14. SEE SEC. VII, P. 9.
2.	T46	DOUBLE ENDED WIRE WRAPPING TERMINAL. SEE SEC. VII, P. 8.
3.	T44	MINIWRAP TERMINAL. SEE SEC. VII, P. 8.
4.	FPA-14	FLAT PAK ADAPTER. OTHER VERSIONS AVAILABLE. SEE SEC. IX, P. 16.
5.	R714	14-PIN DUAL-IN-LINE SOCKET FOR WIRE WRAPPING. OTHER VERSIONS AVAILABLE. SEE SEC. IVA, P. 8.
6.	MP-1	INTEGRATED CIRCUIT MOUNTING PAD, 10-LEAD. MP-2, 12-LEAD. SPREADS ROUND LEAD PATTERN TO FIT .1 X .1 SQUARE GRID. SEE SEC. IV, APPENDIX P.A.
7.	RA9	TRANSISTOR SOCKET TO-5 CASE, 4 LEADS. SEE SEC. IVA, P. 8.
8.	RA4.5	TRANSISTOR SOCKET WITH SADDLE. SEE SEC. IVA, P. 8.

ITEM	CATALOG NO	DESCRIPTION
9.	T120-1	DAISY CHAIN PATCHCORD. FITS .025 SQUARE PINS. SEE SEC. IV, APP. P. 8.
10.	RA3.4	LOW PROFILE 3-PIN TRANSISTOR SOCKET. SEE SEC. IVA, P. 8.
11.	RA10-1	I.C.P. SOCKET, 10-LEAD TYPE. SEE SEC. IVA, P. 8.
12.	T42-1	MICRO-KLIP TERMINAL. SEE SEC. IV, APPENDIX, P. A.
13.	T107	BUS STRIP FOR .042 HOLES ON 0.1 SPACING. SEE SEC. IV, APP., P. C.
14.	T45-4	IMP CLIP TERMINAL FOR INTERCONNECTING DUAL-IN-LINE PACKAGES AS WELL AS TRANSISTORS AND OTHER SEMI-CONDUCTORS. SEE SEC. VII, P. 9.
15.	K32	J-PIN TERMINAL, .025 SQUARE, USED WITH T42-1 FOR WIRE WRAPPING OR DAISY CHAIN. SEE SEC. VII, P. 8.



FPA-14-2 PLUGBORD FOR FLAT PACKS

PLUGGABLE MOUNTING FOR FLAT PACKS

The Vector Plugbord FPA14-2 provides a means of quickly mounting and interconnecting up to twelve 14-lead "flat pack" integrated circuits on a 4 1/2" x 6 1/2" Plug-in circuit board.

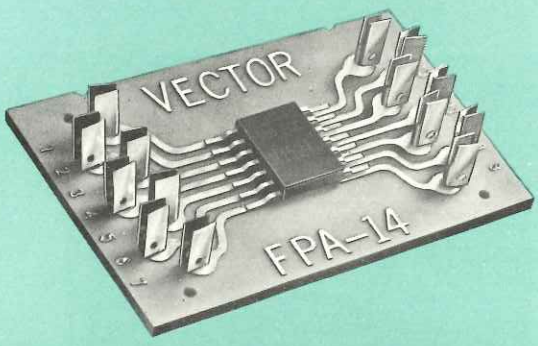
Pads and lead paths are tin alloy coated for easy soldering of the devices to the board. All pads are numbered and have .042" diameter holes which are surrounded by a .110" diameter pad. Vector T42-1 Micro-Klip Terminals or K24 series terminals may be inserted in the holes in the pads, and soldered to facilitate multiple connections to any I.C. lead. Seventeen additional .042" diameter holes which are copper free for independent termination points are located in each row of I.C. pads. Forty-four etched (total 2 sides) independent .156" spaced gold plated contacts are located at the bottom edge of the board. Each contact is numbered and has a .042" diameter hole surrounded by a .125" diameter pad to facilitate making connection to the plug-in contacts.

Boards have two predrilled holes for attachment of Vector HA9 ejector handles, if required. See Appendix.

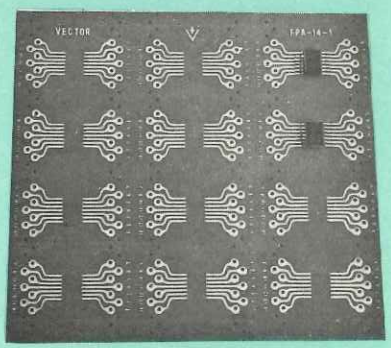
Current rating for a 10° C. temperature rise is 3 amps. For material and plating specifications see Appendix.

ORDERING INFORMATION

CAT. NO.	NO. OF CONTACTS	MATERIAL	MATING RECEPTACLE
FPA-14-2	44	EPOXY GLASS	R644 OR R644-1



FPA-14 FLAT PAK ADAPTER



FPA-14-1 FLAT PAK ADAPTER

FLAT PACK ADAPTERS FOR USE WITH "P" PATTERN MICRO-VECTORBORDS

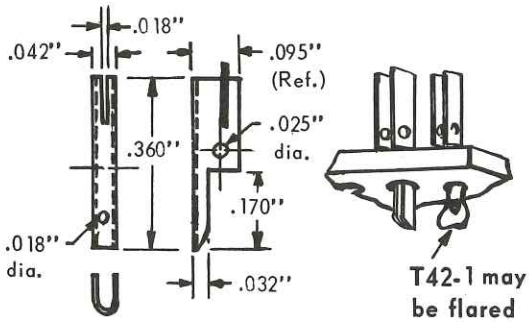
The Vector FPA-14 Flat Pak Adapter provides a convenient, inexpensive method of mounting standard 14-lead flat packs to Vector "P" pattern perforated boards and Plugbords. T42-1 Terminals are installed into the adapter pad holes, and the terminal ends which extend through the bottom are pressed into the "P" Pattern Micro-Vectorbord® to mount the adapter to the board.

Fourteen of the T42-1 Terminals furnished with the adapter should be installed as shown in the illustration, with the open end of each terminal facing away from the center of the adapter. The P149 or P149A insertion tool should be used to install the terminals. To insure firm connection, each terminal should be soldered to the adapter pad.

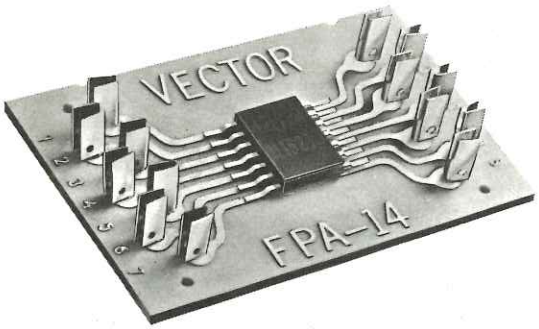
The FPA-14-1 Flat Pak Adapter provides 12 P.C. patterns for mounting flat packs on one board to provide quicker installation. This board can be easily mounted in 4.5" wide Vector-Pak Cases by sliding it into the grooves of the cases.

ORDERING INFORMATION

CATALOG NO.	DESCRIPTION	PKG. QTY.
FPA-14-PKG. 4	1 X 1.6 ADAPTER FOR 14-LEAD FLAT PACK. EPOXY PAPER P.C. BD. WITH 60 T42-1 TERMINALS	4
FPA-14-1	4.8 X 4.5 ADAPTER FOR TWELVE 14-LEAD FLAT PACKS. EPOXY PAPER P.C. BOARD.	1



P149A
Insertion Tool



Showing How Flat Packs Can Be Connected to T42-1 Micro-Klips With FPA-14 Flat-Pak Adapter (See Sec. IX, p. 16)

ZIP PUSH-IN MICRO-KLIP TERMINALS
to FIT .042" Diameter Holes

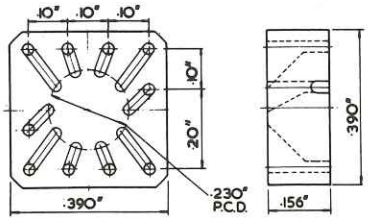
The T42-1 terminal resembles the widely used T28 but is smaller to fit .042" instead of .062" dia. holes. It is useful for P and Q pattern Micro-Vectorbords and is easily pushed into such holes using a P149 tool. It needs no staking for most applications but if desired the portion projecting thru the board hole may be flared with pliers to further secure it. The main slot will hold 3 or 4 .025" dia. wires, 2-.032" wires or 5-.017" dia. wires. An .025" dia. wire can be pushed thru the longitudinal hole with the terminal mounted in the board, or thru the holes perpendicular to the main slot. There is also a hole in the tab which accepts .018" transistor size wires, and, if used, prevents terminal pull out.

Due to the thinness of the MICRO-KLIP (.042") it is ideal for use in connecting integrated circuit leads which will lay in the slot or pass thru the terminal vertically as preferred. Material is beryllium copper with copper flash and bright tin plating.

For wire wrapping leads to T42-1 MINIKLIPS use Vector J-Terminals, described on Page 6, Section VII.

Ordering Information		
Catalog Number	Description	Price
T42-1 Pkg. 100	Terminals	$1.75/Pkg.
T42-1 Pkg. 1000	Terminals	$12.99/Pkg.
P149	Installing Tool-Straight Type	$0.50 each
P149A	Installing Tool-Handle Type	$1.50 each
	Above tools for T42-1	

INTEGRATED CIRCUIT MOUNTING PADS
(TO-5 Types)
ADAPTER FOR ROUND TO RECTANGULAR PATTERNS

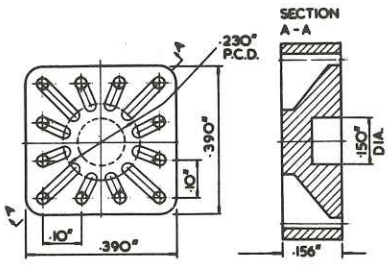


MP-1

MP-1 nylon pad is now available for use mainly with transistor or integrated circuits packaged in TO-5 cans. There are ten (10) holes in this pad which spread the leads from a 0.2" circle to fit the new Vector D.I.P. plugbords with 0.1" rectangular grid spacing or "P" pattern Micro-Vectorbord.

MP-2 pad is similar but takes 12 leads instead of 10.

MP-2



Ordering Information		
Catalog Number	Description	Price
MP-1 Pkg. 10	Mounting Pad for 10 leads	$1.49/Pkg. any Qty.
MP-1 Pkg. 100		$11.75/Pkg. any Qty.
MP-2 Pkg. 10	Mounting Pad for 12 leads	$1.71/Pkg. any Qty.
MP-2 Pkg. 100		$15.75/Pkg. any Qty.

PLUGBORDS

PLUG-IN CARDS NEED FRAMING

Vector "Kardej" is a slender aluminum extrusion used to frame printed circuit cards or Vectorbord®. Cards are thus straightened and stiffened, given a 'lip' handle, front space for marking and attractive appearance.

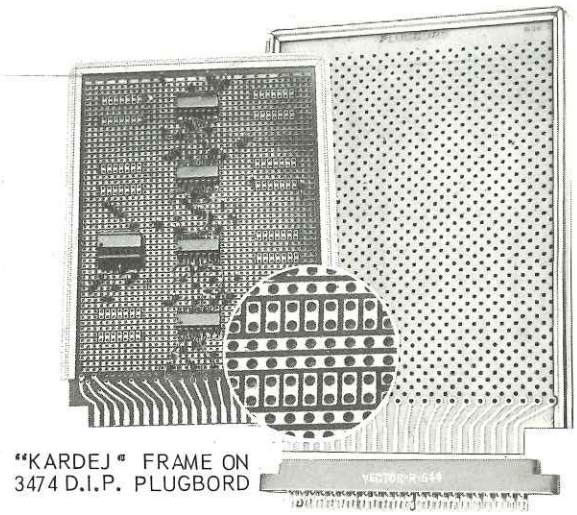
Kardej is supplied in several pre-formed shapes or in strips 24" long for fabrication to desired sizes. To fit a card, Kardej is notched at desired corner points according to Fig. A. The sides can then be readily bent by hand to right angle positions. After insertion of the card the overlapping aluminum edges can be crimped to hold tightly around the card. Or a small quantity of adhesive applied to the card edges just prior to insertion will insure good holding of the parts. Small capsules of adhesive are furnished with the framed Kardej. Raw stock is available in 24" lengths.

Extruded aluminum is normally supplied unfinished but to special order can be supplied with a heavy anodized coat to insulate against contact with printed circuit on card. Aluminum is per Mil-QQA-274.

ORDERING INFORMATION

NOTCHED "KARDEJ" CAT. NO.	FOR FINAL OVERALL FRAMED CARD		"KARDEJ" DIMENSIONS		UNFRAMED CARD DIM.		STANDARD PKG. QTY.
	WIDTH	LENGTH	A	B	W.	L.	
SR0.3-30/45	3"	4-1/2"	2.75"	4.375"	2.73"	4-1/2"	5
SR0.3-45/65	4-1/2"	6-1/2"	4.25"	6.375"	4.23"	6-1/2"	5

UNNOTCHED "KARDEJ" CATALOG NO.	DESCRIPTION	STANDARD PKG. QTY.
SR03-240-062	24" LONG, SQUARE ENDS	2



"KARDEJ" FRAME ON 3474 D.I.P. PLUGBORD

"KARDEJ" FRAME ON 838A P.C. PLUGBORD

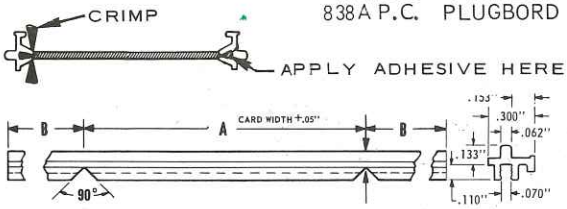


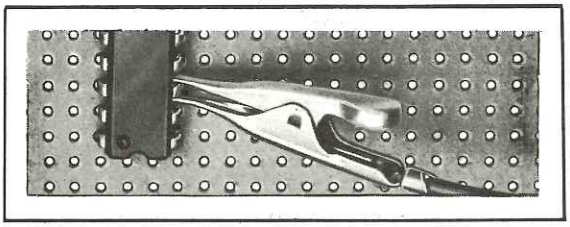
FIG. A. "KARDEJ" NOTCHED FOR CARD

MICRO-GATOR CLIPS

Extremely small clip with jaws which fit between the tabs of dual-in-line packages. Excellent for test connections to micro-circuitry. Steel cadmium plated. 1 3/32" long. Solder connection for No. 20 wire or smaller. Vinyl boots in red or black are available to cover the clips down to the nose.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG. QTY.
T47	"MICRO-GATOR" CLIPS	50
T47B	VINYL BOOT FOR T47. COLOR BLACK	25
T47R	VINYL BOOT FOR T47. COLOR RED	25



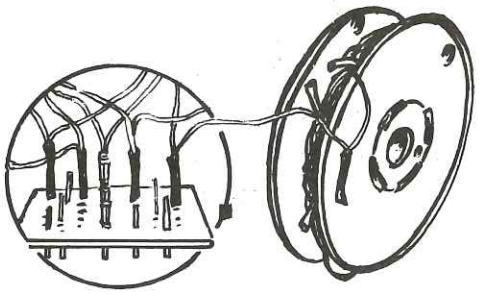
T47 MINIATURE ALLIGATOR CLIP SHOWN WITH D.I.P. INSTALLED IN P PATTERN MICRO-VECTORBORD

SLIP-ON CONTACTS FOR EASY TAB TO WIRE CONNECTION

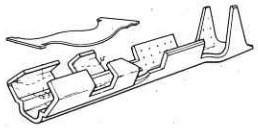
These contacts slip on .025" sq. wire wrap* posts of the R714 socket or on Vector wire-wrap pins. They make reliable contact and are ideal for experimental work where quick tests and changes are important. The ready wired "Daisy Chain" type T120-1 supplied with contacts connected to #26 vinyl insulated wire 5" apart is most convenient. Contacts are gold flashed. Individual contacts only of similar type (T120) but tin plated are also available for those who may wish to attach their own wires either by soldering or crimping.

Cat. No.	Description	Pkg. Qty.
T120	Slip-on single contacts, solder type, tin plated.	50
T120-1 Reel 50	Slip-on contacts, "Daisy Chain" spaced 5", #26 ins. wire, nickel & gold plate. Blue Insulation.	Reel 50
T120-1 Reel 250	Slip-on contacts, "Daisy Chain" spaced 5", #26 ins. wire, nickel & gold plate. Blue Insulation.	Reel 250

*T.M. Gardner-Denver Co.



WIRED TOGETHER "DAISY CHAIN" #26 GAGE STRANDED CAT. NO. T120-1 REEL OF 250 OR 50

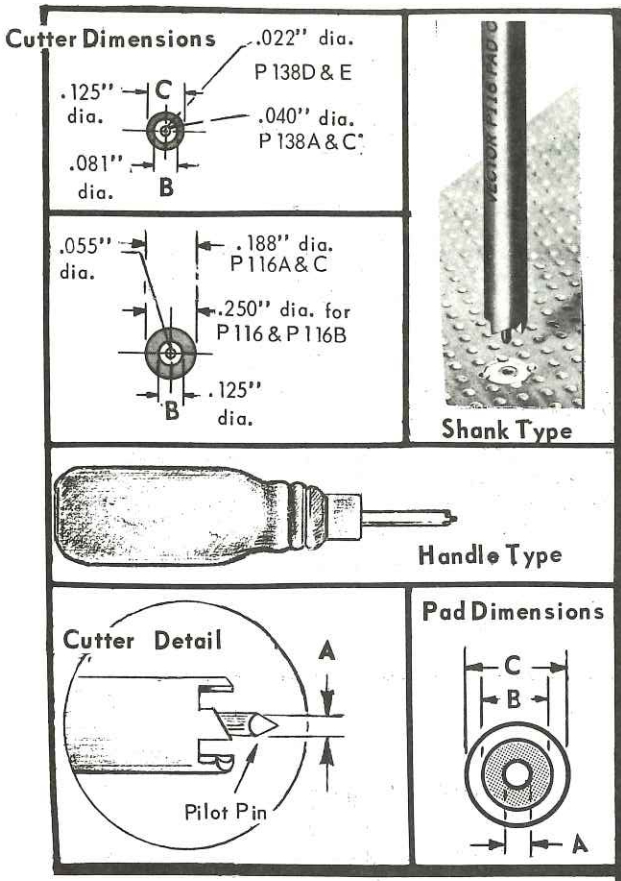


T120 SLIP-ON CONTACTS FOR .025" SQUARE PINS SINGLE CONTACTS

EXTRACTOR TOOL

P-150 Extractor Tool assists removal of D.I.P. from topside to minimize lead damage. Simplifies removal in close packaging conditions.

P-150 EXTRACTOR TOOL



PAD CUTTER TOOLS FOR COPPER CLAD BOARDS

Copper Pad Cutter Tools are useful for "ground plane" type circuitry using copper clad Vectorbord*. Pad Cutters provide a simple means to make insulating rings around the pre-punched holes to isolate terminal points. The tools have a pilot pin which enters the holes. By rotating the specially designed cutter a "doughnut" shaped cut is produced to leave a small anchor pad of copper in center of ring to solder terminals, wires or pins to board.

FOR THREE HOLE SIZES

The P138 series tools are for use with Micro-Vectorbord having .042" holes. The P138D and P138A with the handles are hand operated tools. The P138E and P138C without handles are used in hand or electric drills.

The P116 series tools are for use with all copper clad Vectorbord and Plugbords with an .062" hole diameter pre-punched grid. Use in any 1/4" chuck. P116B and P116C are similar, but with handles.

ORDERING INFORMATION

Cat. No.	Pilot Pin Dia. A	B I.D.	C O.D.	Shank Dia.	Handle	For Board Patterns
P116	.055	.125	.250	.250	no	G,F,H
P116A	.055	.125	.188	.250	no	G,F,H
P116B	.055	.125	.250	.250	yes	G,F,H
P116C	.055	.125	.188	.250	yes	G,F,H
P138A	.040	.081	.125	.125	yes	P,Q
P138C	.040	.081	.125	.125	no	P,Q
P138D	.022	.081	.125	.125	yes	M,K
P138E	.022	.081	.125	.125	no	M,K

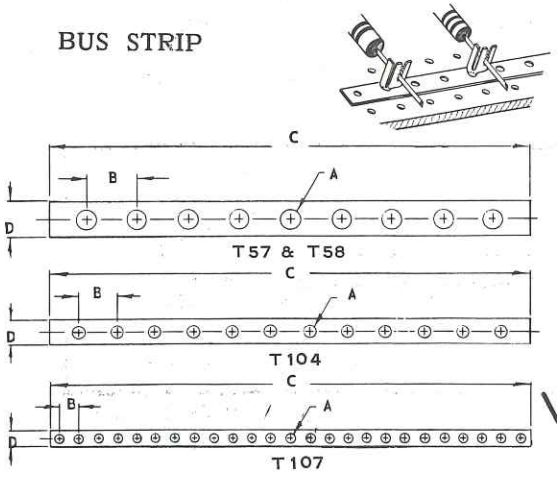
P 141B PAD AND LINE CUTTER

PALM SIZE ELECTRIC DRILL FOR EXPERIMENTERS

A most compact yet powerful hand tool which handles as easily as a pencil! Performs intricate, detailed work such as line and pad cutting, drilling, routing, grinding (with extra accessories). Has 30,000 RPM motor, dynamically balanced for vibration-free operation. Weighs only 9 oz.,size 6 1/2" x 1 1/2". With 1/8" collet fits P138C and P138E Pad Cutters described above; also P141A Router Bit for line cutting (Sec. IV,p. 18). For general purpose use order P141C Motor Drill having accessories listed below. For line or pad cutting work as described on p. 18, Sec. IV, order P141B Electric Line Cutter.

Catalog No.	Description
P141C	Electric Drill w/4 collets(1/8, 3/32, 1/16 & 1/32) & wrench
P141B	Electric Drill with 1/8" collet, wrench, 1 - P141A Router Bit for line cutting and guide.
P141A	Router Bit only, 1/8" shank (see p. 18, Sec. IV)
P141D	3 extra collets size 3/32,1/16 & 1/32 as access. for P141B

BUS STRIP



BUS STRIP

Punched tinned copper strip which mounts to Vectorbord* deck with Zip Push-in Terminals or pins. Furnished 0.20" wide & .093" holes on .265" centers for "A" pattern, or 0.125" wide & .062" holes on 0.2" centers for "F", "G" & "H" patterns. Also furnished 0.08" wide with .042" holes on 0.1" centers for "P" & "Q" pattern Vectorbord.

Furnished in packages of 10 or 100 strips.

Catalog Number	Packaged Quantities	A	B	C	D	Material Thickness	Board Patterns
T57	10 100	.093	.265	16"	.20	.015	A
T58	10 100	.093	.265	8"	.20	.015	A
T104	10 100	.062	.20	17"	.125	.012	F,G&H
T107	10 100	.047	.10	14"	.080	.017	P & Q

*Trademark

PLUGBORDS

PLUGBORD MATERIAL SPECIFICATIONS FIRE RETARDANT IN ALL TYPES

LAMINATES

Phenolic Paper Laminate

Type PBE-P per Fed. Spec. L-P-513, NEMA Grade FR-2. This is a cold punching type with fire retardant characteristics. Maximum operating temperature 250° F.
Color: Natural (cream to tan.)

Phenolic Paper Laminate- Copper Clad

NEMA Grade FR-2. 1 oz. copper clad one side or two sides (.0014 thk.) Most economical of copper clad laminates. Same color and operating temperature as above. Fire Retardant.

Epoxy Paper Laminate

Type PEE per MIL-P-22324, NEMA Grade FR-3. This is a cold punching grade, maximum operating temperature, 250° F. Fire Retardant. Color: Cream.

Epoxy Paper Laminate- Copper Clad

Type FL-PH per MIL-P-13949D, 2 oz copper cladding (.0028 thk.) one or two sides. Same laminate as above. Color: Cream. Fire Retardant.

Epoxy Glass Laminate

Type GEE per MIL-P-18177C, NEMA Grade FR-4. Maximum operating temperature, 300° F. Equivalent to NEMA Grade G-10 but fire retardant in addition.
Color: Green is standard (some buff).

Epoxy Glass Laminate- Copper Clad

Type FL-GF per MIL-P-13949D, 2 oz. copper one or two sides. Copper cladding (.0028 thk.) Same laminate material as above. Fire Retardant.
Color: Green is standard (some buff)

CONTACTS (Plug Pins)

Ejbord Pins: Copper alloy, .040" thick with pin portion rounded to .040" diameter and remaining portion flat. Nickel plated .0001" per QQ-N-290 Class VII, and gold flashed .00003" per Mil-G-45204, Type II.

Varicon Contacts: Phosphor Bronze per QQ-B-750, Grade A, nickel plated .00003" to .00015", gold flash .00001" to .00002" per Mil-C-21097B.

Etched Contacts: Copper, Gold Plated: Nickel plated .0001" per QQ-N-290, Class VII under a .00002" gold plate per Mil-G-45204B. Solder Plated: 60/40 tin solder. Unplated: Anti-corrosion protective coating applied.

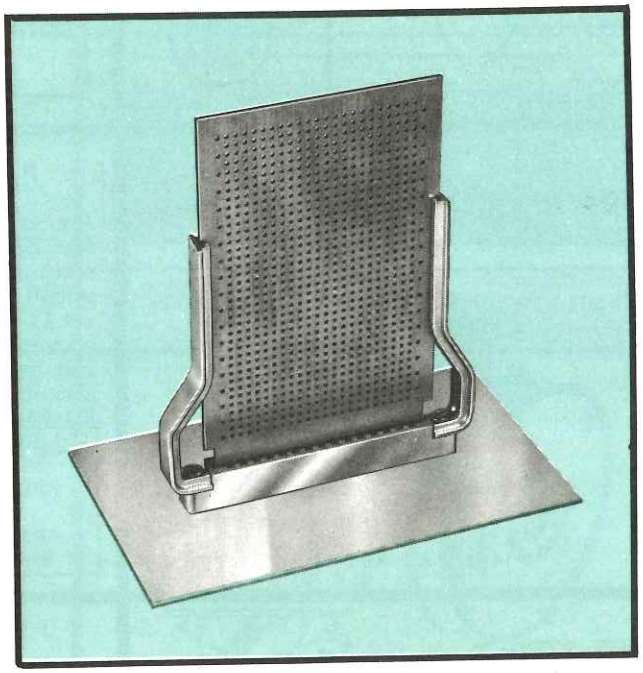
RECEPTACLE MOUNTED CARD GUIDES

The BR27 Series Card Guides provide rugged support for 1/16" free standing circuit boards and sure guidance while engaging board and receptacle. This arrangement is commonly found on "mother boards" and in units where space is at a premium. Several styles of guides are offered for the applications shown in the ordering table.

Package quantity all catalog numbers: 2 guides, 2 screws, 4/40, Pan Hd., 3/4" lg., 2 flat washers, 2 lock washers, 2 hex nuts, 4/40. In bulk quantities (more than 50 pairs) fasteners packaged separately from guides. Material is aluminum alloy, clear anodized.

ORDERING INFORMATION

CATALOG NO.	USE WITH	
	RECEPTACLE (SEE SEC. IVA)	PLUGBORD
BR27	R644 AND R644-1	4.5 WIDE PLUGBORDS WITH CTRD. CONTACTS, SUCH AS VECTOR NOS. 838-1, 3474, 3677, 3682 & 3662 SERIES.
BR27-1	R636	4.5 WIDE PLUGBORDS WITH CENTERED CONTACTS, SUCH AS NO. 3719 SERIES.
BR27-1	R644 AND R644-1	4.25 WIDE PLUGBORDS WITH CENTERED CON-
BR27-2	R644 AND R644-1	4.5 WIDE PLUGBORDS WITH CONTACTS .050 OFFSET FROM CENTERLINE, SUCH AS NOS. 838, 838WE, 838A, 838AWE AND 838PWE.
BR27-3	R630	2.73 WIDE PLUGBORDS WITH CENTERED CONTACTS, SUCH AS VECTOR 3796 AND 3797 SERIES.
BR27-4	R644-2	2.73 WIDE PLUGBORDS WITH CENTERED CONTACTS, SUCH AS NO. 3795.

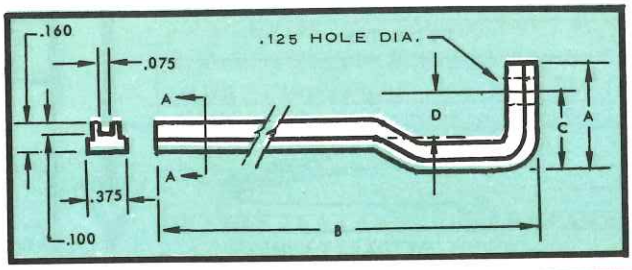


BR27-3 RECEPTACLE MOUNTED CARD GUIDES

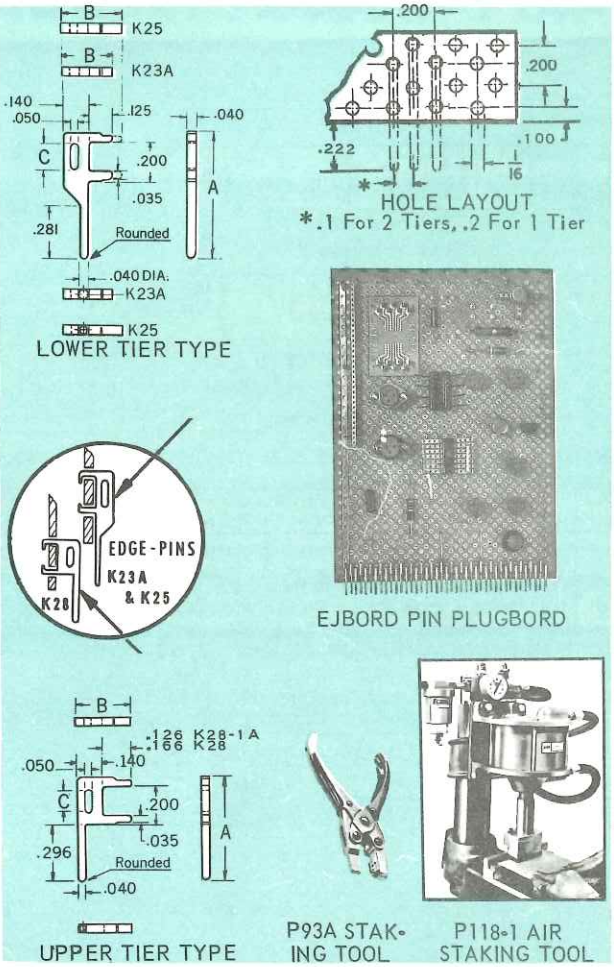
ON R630 RECEPTACLE WITH 2.73 WIDE PLUGBORD

DIMENSION TABLE FOR BR27 SERIES CARD GUIDE

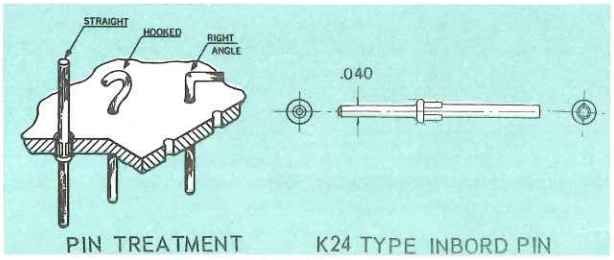
CATALOG NO.	A	B	C	D
BR27	.60	3.05	.47	.25
BR27-1	.49	3.06	.36	.13
BR27-2	.55/.65	3.0/3.1	.42/.52	.20/.30
BR27-3	.49	3.98	.36	-.10
BR27-4	.53	3.94	.40	-.05



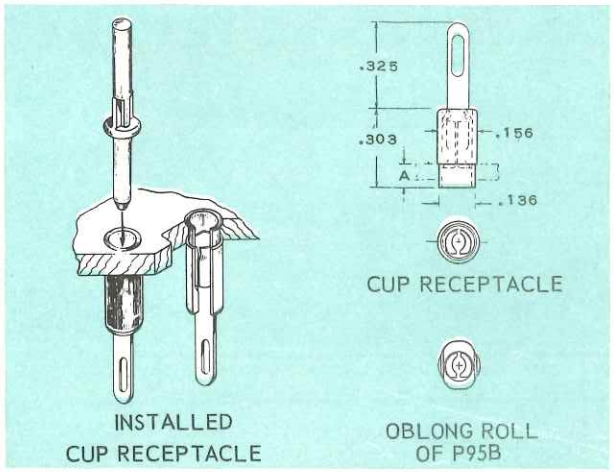
EJBORD PINS



INBORD PINS



CUP RECEPTACLES



UNIQUE ROUND PINS AND CUP RECEPTACLES MOUNT EASILY WHEREVER NEEDED

EJBORD PINS FOR SINGLE OR DOUBLE TIER CONTACTS

Ejbord Pins are attached on 1/16" to 1/8" thick circuit boards with two fingers which pass through 1/16" diameter holes and are staked on the reverse side. Individual pins may be attached to boards with hand tool P93A. For production, an air operated staker can be made to order. Pins are spaced .1", .2", or as required.

SPECIFICATIONS

Material: Brass, .040" thick with pin portion rounded to .040" diameter, remaining portion flat. Nickel plated per QQ-N-290, Class 1, Type VI, and gold plated per Mil-G-45204, Type II.

ORDERING INFORMATION

CATALOG NO.	DESCRIPTION	DIMENSIONS A	B	C	STD. PKG.
K23A (LOWER TIER)	EJBORD PIN FOR 1/16 BOARD	.647	.265	.156	50 & 1000
K25 (LOWER TIER)	EJBORD PIN FOR 1/32 & 1/8 BOARD	.647	.320	.156	50 & 1000
K28 (UPPER TIER)	EJBORD PIN FOR 3/32 BOARD	.546	.306	.125	50 & 1000
K28-1A (UPPER TIER)	EJBORD PIN FOR 1/16 BOARD	.546	.266	.125	50 & 1000
P93A P118-1	HAND STAKING TOOL FOR ABOVE AIR OPERATED STAKING TOOL. MADE TO SPECIAL ORDER ONLY.				

INBORD PLUG PINS

Inbord Plug Pins may be mounted wherever required to provide plug-in capability for modules with any number of pins in any arrangement. The tip of the pin is rounded for easy entry. The knurled portion, when pressed into a tight hole (.038) cuts in and prevents the pin from rotating while holding firmly against pullout. Solder on the emergent end of the pin will further prevent pullout. Installation is easily accomplished with available tools.

Inbord Plug Pins make excellent test points. These pins may also be mounted singly or in arrays as test points or male connector points on circuit boards. Mating single female contacts (R23 & R24 series) or molded blocks with any number of contacts from 3 to 41 are available by selecting the appropriate Vectorconn Connectors (see Section IVA).

For a complete listing of Inbord Pins and installing tools see Sec. VII pp. 7 and 8.

CUP RECEPTACLES FOR .040 DIAMETER PINS

Vector Cup Receptacles listed below accept Inbord Plug Pins and Ejbord Pins listed above or any .040" diameter pin of proper length. High reliability, press formed phosphor bronze contacts like those used in Military type sockets, are positioned in brass shells with contact tabs emerging through a slot in one end. May be mounted anywhere on 1/16" or 3/32" panels in .140" diameter holes with staking tools listed below. Cup spacing should be not less than 0.2". A special staking anvil for the 0.2" spacing is listed giving greater clearance between the edges than the standard anvil. Staking and holding tools have 1/2" diameter shank for arbor or drill press use. P95 provides uniform "roll"; P95A provides oblong "roll" for 0.2" spacing.

SPECIFICATIONS

Cup: Half hard brass, bright tin plate per Mil-T-10727; contact: Phosphor bronze, nickel plate per QQ-N-45204, Type II.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	DIM. A	STAKING TOOLS CIRCULAR ROLL	OBLONG ROLL
R23A	CUP RECEPTACLE FOR .062 THK. BD.	.095	P95	P95A
R24A	CUP RECEPTACLE FOR .093 THK. BD.	.127	P95	P95A
P95B	CUP HOLDER - USE FOR BOTH STAKERS.			

RECEPTACLES FOR PRINTED CIRCUIT CARDS

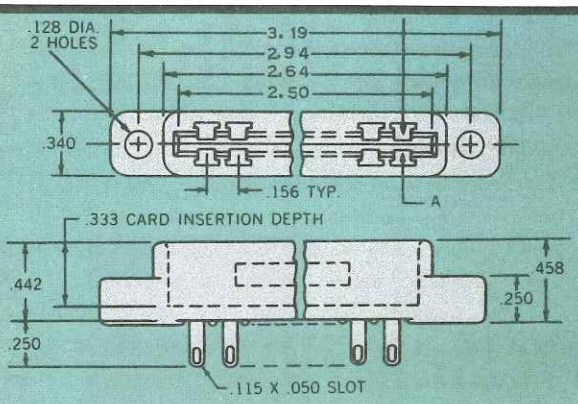
CONNECTORS

RECEPTACLES FOR PRINTED CIRCUIT PLUGBORDS WITH ETCHED CONTACTS

CONTACTS ARE PHOSPHOR BRONZE, NICKEL AND GOLD PLATED. CASTINGS ARE AS SPECIFIED IN EACH TYPE. ALL ARE FOR 1/16" THICK CARDS. 0.156" SPACED TABS AS WELL AS TYPES FOR 0.1" SPACED TABS AS LISTED.

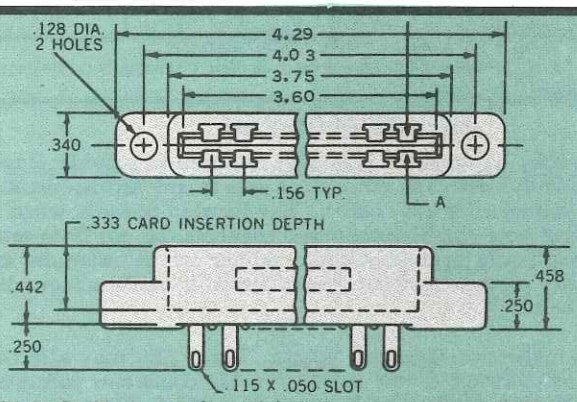
ALL RECEPTACLE CONTACTS ARE DUAL-SIDED FOR USE WITH ETCHED PLUG CONTACTS ON ONE OR BOTH SIDES OF CARDS. MAY HAVE FRONT AND BACK SIDES MULTIPLED FOR RELIABILITY.

POLARIZATION IS ACCOMPLISHED BY INSERTION OF PLASTIC POLARIZATION KEYS IN RECEPTACLES AND BY PROVIDING AN APPROPRIATELY SPACED CUTOUT ON THE CARD TO ACCOMMODATE THE KEY. IN-CONTACT KEY REDUCES USABLE CONTACTS BY ONE NO LOSS OF CONTACT WITH BETWEEN-CONTACT KEY.



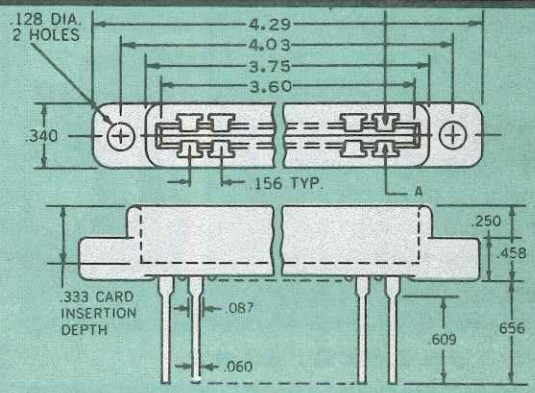
R630 P.C. Receptacle, 15/30 Contacts On .156 Centers

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R630	15/30	DIALLYL PHTHALATE	NICKEL GOLD	SOLDER TAIL
0077-50-3	IN-CONTACT POLARIZING KEY. PKG. 50.			
0077-50-6	BETWEEN CONTACT POLARIZING KEY. PKG. 50.			



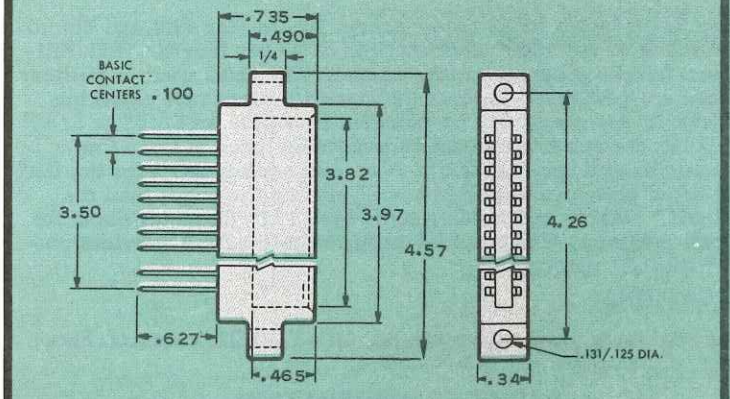
R644 P.C. Receptacle, 22/44 Contacts On .156 Centers

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R644	22/44	DIALLYL PHTHALATE	NICKEL GOLD	SOLDER TAIL
0077-50-6	BETWEEN-CONTACT POLARIZING KEY. PKG. 50.			
0077-50-3	IN-CONTACT POLARIZING KEY. PKG. 50			



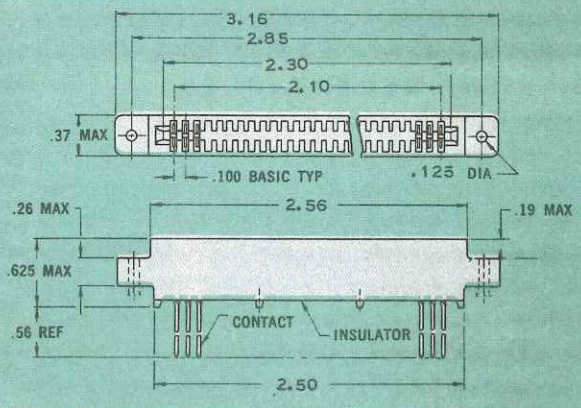
R644-1 P. C. Receptacle, 22/44 Contacts On .156 Centers

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R644-1	22/44	DIALLYL PHTHALATE	NICKEL GOLD	WIRE WRAP .031 X .062
0077-50-3	IN-CONTACT POLARIZING KEY. PKG. 50.			
0077-50-6	BETWEEN-CONTACT POLARIZING KEY. PKG. 50.			



R636 P.C. Receptacle, 36/72 Wire Wrap* Contacts, 0.1 Ctrs.

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R636	36/72	ELECTRICAL GRADE PHEN.	GOLD, SILVER	WIRE WRAP .025 SQ.
0077-50-8	IN-CONTACT POLARIZING KEY. PKG. 50.			



R644-2 P.C. Receptacle, 22/44 Wire Wrap Contacts On 0.1 Ctrs.

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R644-2	22/44	GLASS FILLED PHEN.	NICKEL GOLD	WIRE WRAP .025 SQ.
0077-50-7	IN-CONTACT POLARIZING KEY. PKG. 50.			

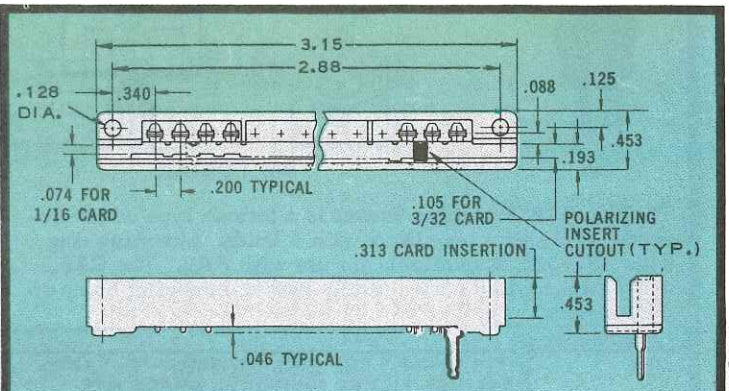
* T.M. GARDNER-DENVER COMPANY

RECEPTACLES FOR ELCO VARICON CONTACTS

RECEPTACLES FOR PLUGBORDS WITH ELCO VARICON PIN CONTACTS

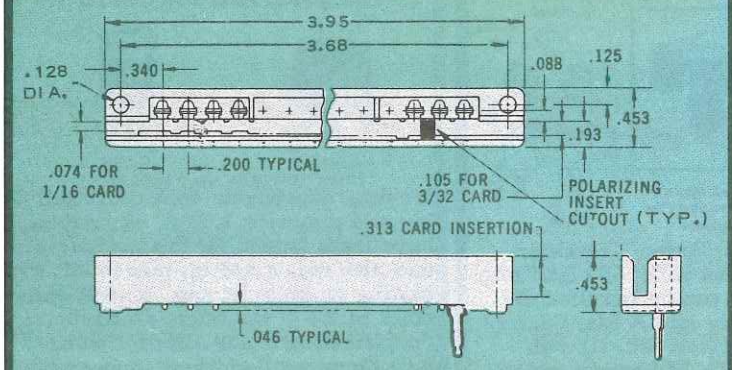
CONTACTS ARE PHOSPHOR BRONZE, NICKEL AND GOLD PLATED. CASTINGS ARE DIALLYL PHTHALATE. ALL ARE FOR 1/16" THICK CARDS. SINGLE-TIER RECEPTACLES ARE OPEN END TYPE WITH CONTACTS SPACED ON 0.2" CENTERS. DOUBLE-TIER RECEPTACLES HAVE CONTACTS SPACED ON 0.1" CENTERS.

POLARIZATION IS ACCOMPLISHED BY INSERTION OF PLASTIC POLARIZATION KEYS IN RECEPTACLES AND BY PROVIDING AN APPROPRIATELY SPACED CUTOUT ON THE CARD TO ACCOMMODATE THE KEY. KEY CAN BE INSERTED WITHOUT LOSS OF CONTACT.



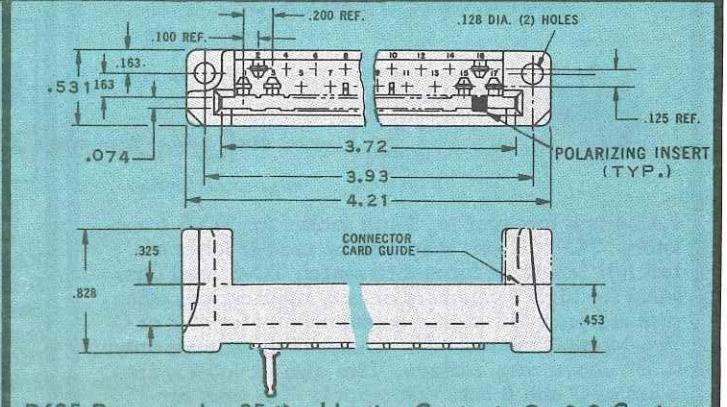
R612-1 Receptacle, 12 Single-tier Contacts On 0.2 Centers For Use With Vector No. 837 Series Plugbords

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R612-1	12	DIALLYL PHTHALATE	NICKEL GOLD	SOLDER TAIL
0077-50-1	BETWEEN-CONTACT POLARIZING KEY. PKG. 50.			



R616-1 Receptacle, 16 Single-tier Contacts On 0.2 Centers For Use With Vector No. 812 Series Plugbords

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R616-1	16	DIALLYL PHTHALATE	NICKEL GOLD	SOLDER TAIL
0077-50-1	BETWEEN-CONTACT POLARIZING KEY. PKG. 50			



R635 Receptacle, 35 Double-tier Contacts On 0.2 Centers For Use With Vector 848WE And 848PWE Plugbords

CAT. NO.	NO. OF CONTACTS	INSULATING MATERIAL	CONTACT PLATING	TAB TYPE
R635	35	DIALLYL PHTHALATE	NICKEL GOLD	SOLDER TAIL
0077-50-1	BETWEEN-CONTACT POLARIZING KEY. PKG. 50			

INDIVIDUAL ELCO VARICON PLUG CONTACTS

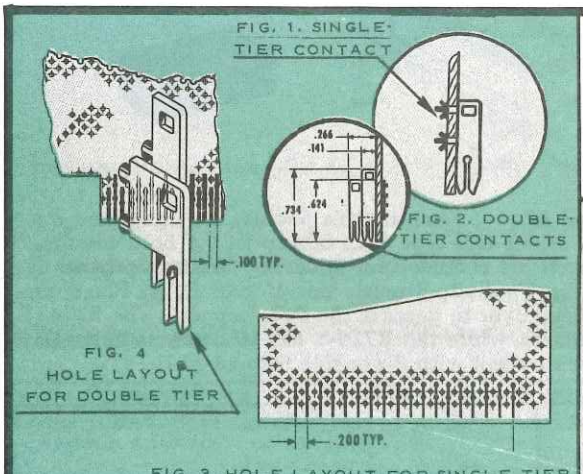


FIG. 3. HOLE LAYOUT FOR SINGLE TIER

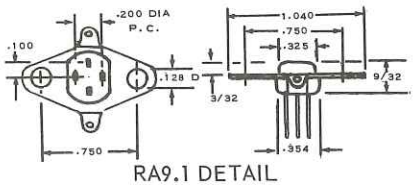
ELCO VARICON CONTACTS AND CONTACT STRIPS

CONTACTS ARE IN TANDEM STRIPS. STAKE IN 1/16 BOARDS WITH 0.2 SPACING OF CONTACTS. STAKE INTO .062 HOLES WITH T15.22 EYELET FILLER. PLASTIC STRIP WILL PULL OFF WHEN HEATED. CONTACTS ARE PHOSPHOR BRONZE PER QQB-750, GRADE A, NICKEL PLATE, 30-150 MICRO-INCHES PLUS 10-20 MICRO-INCHES GOLD. USE FIGS. 1 & 3 TYPE FOR SINGLE TIER AND FIGS. 2 & 4 TYPES FOR DOUBLE TIER.

CATALOG NO.	DESCRIPTION
1746-125	CONTACTS FOR SINGLE-TIER PLUGBORD, 60 CONTACTS PER STRIP.
1746-126	CONTACTS FOR UPPER TIER OF DOUBLE-TIER PLUGBORD, 60 CONTACTS PER STRIP.
1746-127	CONTACTS FOR LOWER TIER OF DOUBLE-TIER PLUGBORD, 60 CONTACTS PER STRIP.
T15.22	FILLER EYELET USED TO STAKE CONTACT INTO .062 HOLE. BRASS, TINTILLATE FINISH. STANDARD PKG. 1000.
P128	CONTACT STAKING TOOL.

TRANSISTOR SOCKETS FOR TO-5 SERIES

RA9



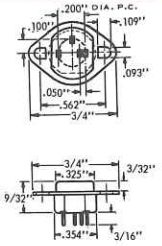
RA9.1 DETAIL

The No. RA9 Transistor Socket is a tetrode type which accepts TO-5 series transistors with 4 leads. Mounting ring with .437 O.D. is available tor use with RA9. The RA9.1 version is supplied with a saddle having mounting holes on .750 centers.

ATALOG NO.	DESCRIPTION
RA9	4-PIN SOCKET FOR TO-5 TRANSISTORS. CASTING: MICA FILLED PHENOLIC, GRADE MFE. CONTACTS: BERYLLIUM COPPER, GOLD PLATED OVER SILVER
0721-05-11	MOUNTING RING FOR RA9. BRASS, CAD. PLATE.
RA9.1	4-PIN TYPE FOR TO-5 TRANSISTORS. SAME AS RA9 EXCEPT WITH BRASS, CADMIUM PLATED MOUNTING SADDLE.

UNIVERSAL TYPE TRANSISTOR SOCKET

RA4.5

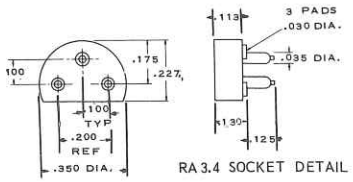


RA4.5 DETAIL

RA4 Transistor Socket accepts transistors with 3 leads either in line or in triangular configuration. RA4.5 version is supplied with a saddle having mounting holes on .562 centers.

CATALOG NO.	DESCRIPTION
RA4	LIKE RA4.5 SEE DETAIL) EXCEPT NO SADDLE & WITH 3/8" LEADS. CASTING: MICA FILLED PHENOLIC, GRADE MFE. CONTACTS: BERYLLIUM COPPER, GOLD FLASH OVER SILVER PLATE.
RA4.5	DUAL TRANSISTOR SKT. WITH SADDLE. CONTACTS AND CASTING SAME AS RA4. SADDLE: BRASS, NICKEL PLATED.

LOW PROFILE TRANSISTOR SOCKET FOR ROUND CASE TRANSISTORS

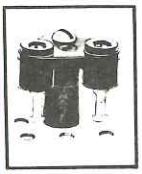


RA3.4 SOCKET DETAIL

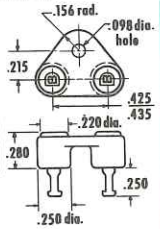
RA3.4 is a low profile, 3-pin socket for TO-5 transistors. TO-18 cases may also be used if leads are left full length or formed to match TO-5 lead ctrs. Ideal for high component density applications when pins are press fitted into prepunched holes of P or Q Pat. Micro-Vectorbord®. Socket body extends only 0.13" above mtg. surface. Pins also fit loosely into holes of G and E Pat. Vectorbord. Tab ends are closed for flow soldering.

CAT. NO.	MATERIAL
RA3.4	CASTING: 20% GLASS FILLED GREEN NYLON. CONTACTS: BERYLLIUM COPPER, GOLD PLATED OVER COPPER.

POWER TRANSISTOR SOCKET



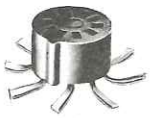
RA2 POWER TRANSISTOR SOCKET



RA2 Power Transistor Socket with .530 lead mtg. ctrs. can be installed directly into A Pat. Vectorbord (see Sec. II) with 2/56 x 3/4 screws and #2 nuts. Order hdw. separately.

Specifications: Casting: Black Bakelite, Grade CFG. Contacts: Phosphor bronze, cad. plated.

ROUND SOCKETS FOR TO-5 PKG. INTEGRATED CIRCUITS



RA10-1

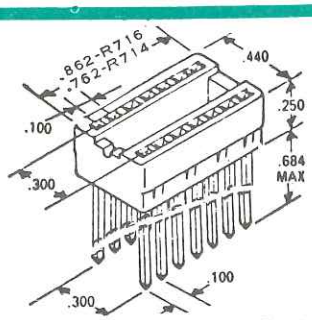
RA88

(CENTER PIN NOT SHOWN)

Provide dependable means of installing and removing I.C.'s. -1 Part Nos. have leads fanned for top surface mtg. and .040 dia. x 3/8 lg. pins in ctr. of casting for press fit mtg. in .042 dia. holes of P & Q Pat. Micro-Vectorbord. Specifications: Insul.: Diallyl phthalate. Contacts: Beryllium copper with copper flash, gold plate.

CAT. NO.	NO. CONTACTS	PIN CIRCLE
RA88	8	.200
RA88-1	8	.200
RA10	10	.230
RA10-1	10	.230

WIRE WRAP*TYPE D. I. P. SOCKET

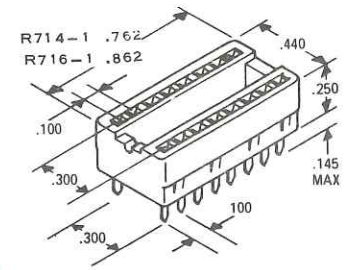


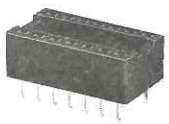
R714

R714 and R716 Dual-in-line Sockets for integrated circuits have wire wrap* tabs .025 square, .684 long, to fit 0.1 hole centers. Leads fit directly into .042 dia. holes of Vector D.I.P. Plugbords. The R714 has 14 contacts. The R716 has 16 contacts in similar arrangement except with 8 per side instead of 7. Connections can be made to tabs with Gardner-Denver tools and approximately #28 wire.

CATALOG NO.	NO. CONTACTS	MATERIAL
R714-PKG. 5	14	CASTING: GLASS FILLED NYLON. CONTACTS: PHOSPHOR BRONZE,
R716-PKG. 5	16	NICKEL GOLD PLATED.

PRINTED CIRCUIT TYPE D. I. P. SOCKET





R714-1

R714-1 and R716-1 Dual-in-line Sockets for integrated circuits have solder-tail type P.C. tabs to fit 0.1 hole centers. These sockets are intended for soldering direct to printed circuit pads. Tabs slip directly into Vector D.I.P. Plugbords and then bend over to contact the P.C. copper. The R714-1 has 14 contacts, while the R716-1 has 16 contacts in similar arrangement except with 8 per side instead of 7.

CATALOG NO.	NO. CONTACTS	MATERIAL
R714-1-PKG.5	14	CASTING: GLASS FILLED NYLON. CONTACTS: PHOSPHOR BRONZE,
R716-1-PKG. 5	16	TIN PLATED.

*T.M. Gardner-Denver Co.

CONNECTORS

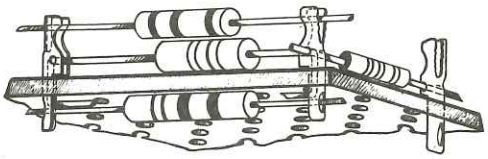


FIG. 1

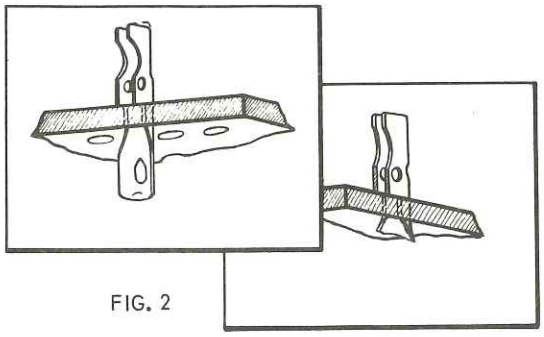
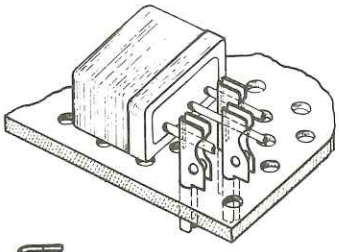
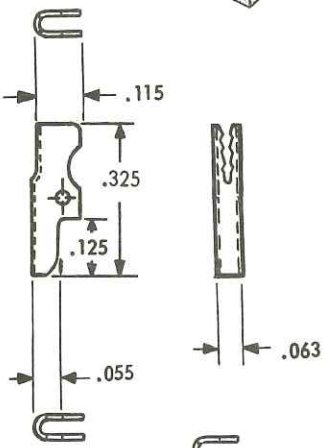


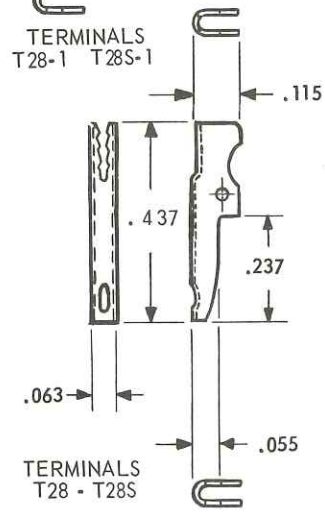
FIG. 2

FIG. 3





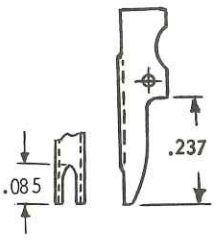
TERMINALS
T28-1 T28S-1



TERMINALS
T28 - T28S

FIG. 4

P91A
INSERTION
TOOL



FOR DIMENSIONS NOT GIVEN, SEE FIG.4

TERMINALS
T-28-2

FIG. 5

TERMINALS TO FIT .062 DIA. HOLES

The T28 Push-in Terminal is a very small contact designed for miniature circuitry where the well known T9.4 Push-in might be too large. It is easily inserted into 1/16" round holes and needs no staking operation. Ideal for the experimenter, it is also well suited for use in printed circuits and other production applications.

DESIGNED FOR COMPACT ASSEMBLIES

1. Low Cost: The T28 Push-in is stamped from beryllium copper sheet, silver or tintillate. This provides strength and springy action. It is priced below turned type terminals and may be re-used, if desired, by pulling it out of the board.

2. Compactly Designed - Yet Holds Up To Six Leads: The T28 looks neat; yet, using upper and lower portions, as many as six leads may be connected to it in the three possible directions. See Fig. 1. Notice the serrations in the main slot which grip small component leads, including transistor leads. The tab is provided with a lead hole or slot if preferred.

3. Optional Hand Staking Possible: Although no staking is required, the terminal may be staked if desired. Fig. 2 illustrates one staking method. Here the small end of the terminal has been flared using " flats " or needle nose pliers. This prevents it from pulling out.(see Fig. 3)After flaring, the small end of the terminal may be cut with a pair of cutting pliers.

Fig. 3 illustrates how the tab can be simultaneously flared adjacent to the board and cut off by use of the usual diagonal cutting pliers.

4. Easily Inserted: Terminals can be inserted by use of a 1/2" or 1 w. resistor with the wires cut about 9/16" long on one side and entirely off on the other side. The short wire is inserted in the terminal and on through the hole. Special hand tools Vector P91A or P91 are used to insert T28 series terminals. Vectorbord* Type B, E, F, G or H is recommended for use with T28 terminals. The Vector P91 insertion tool has a 1/4" metal shaft type handle which permits to the tool to be inserted in a drill press or arbor press for a more convenient operation. The Vector P91A insertion tool has a wooden handle.

Note: See Sec. IV, Page 20A for similar terminals to fit .042" holes.

*T.M.

SPECIFICATIONS

CAT. NO.	DESCRIPTION	TAB STYLE	MATERIAL	PLATING	STD.PKG.
T28	Push-In Terminals	.237" & Hole	Beryllium Copper	Tintillate	Bags of 100 or 1000
T28S				Silver	
T28-2		.237" & Slot	Beryllium Copper	Tintillate	
T28-1		.125" No Hole	Beryllium Copper	Tintillate	
T28S-1				Silver	
P91A (Preferred)	Insertion Tools for T28 Series		Steel with Wooden Handle	Cadmium Plated	1 Each
P91			Steel-No Hdl.	Cadmium Plated	

EYELETS FOR CIRCUIT BOARDS

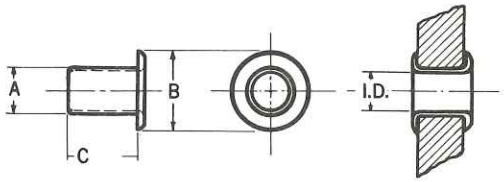
Rolled Flange and Funnel Flange eyelets are useful for circuit connections in VECTORBORD*, the prepunched board per Sec. II, Pgs. 1-6.

ROLLED FLANGE EYELETS

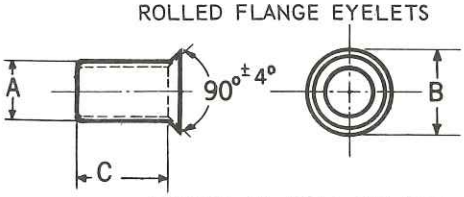
The T15 series is for .062" diameter holes; the T7 series with .093" diameter holes. Std. Pkg.-1000.

SPECIFICATIONS: Eyelets are brass with a tintillate plating.

CAT. NO.	DIA. 'A'	DIA. 'B'	LGTH. 'C'	METAL THKNS.	NOM. ID	DRILL SIZE	BOARD THKNS.
T15.22	.059	.105	.062	.007	.042	1/16	–
T15.23	.059	.105	.093	.007	.042	1/16	1/16
T15.24	.059	.105	.125	.007	.042	1/16	3/32
T15.26	.059	.105	.187	.007	.042	1/16	–
T15.27	.059	.105	.219	.007	.042	1/16	–
T7.33	.089	.150	.093	.009	.068	3/32	1/16
T7.34	.089	.150	.125	.009	.068	3/32	3/32
T7.35	.089	.150	.156	.009	.068	3/32	1/8
T7.36	.089	.150	.187	.009	.068	3/32	–
T7.37	.089	.150	.219	.009	.068	3/32	–
T7.39	.089	.150	.281	.009	.068	3/32	–



ROLLED FLANGE EYELETS

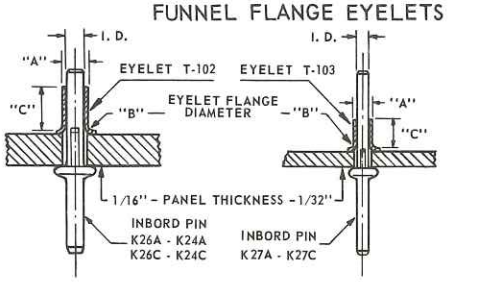


FUNNEL FLANGE EYELETS

FUNNEL FLANGE EYELETS

Funnel Flange eyelets may be used in 1/16" holes, .050" holes & .042" holes providing good solder fillet, and faster insertion of leads. Mat'l., brass or copper, tintillate finish. Std. Pkg. 1000.

CAT. NO.	DIA. 'A'	DIA. 'B'	LGTH. 'C'	METAL THKNS.	NOM. I.D.	DRILL SIZE	BOARD THKNS.	MAT.
TF15.23	.059	.095	.088	.006	.047	.062	1/16	BRASS
TF15.24	.059	.095	.125	.006	.047	.062	3/32	BRASS
TF2.23	.047	.080	.093	.006	.035	.052	1/16	COPPER
T16.13	.041	.071	.102	.007	.027	#58	1/16	COPPER
T16.12	.038	.065	.047	.005	.029	#58	1/32	COPPER
P145	PICKUP PINS FOR EYELETS PACKAGE OF 25							



RETAINERS FOR INBORD PIN ATTACHMENT

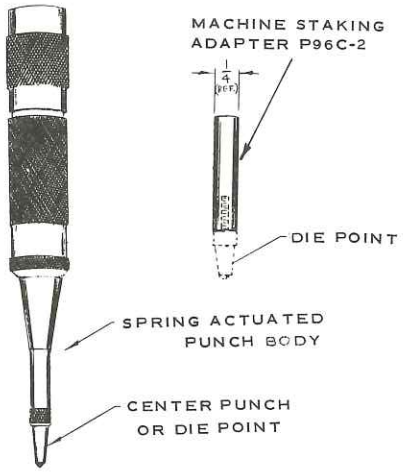
FLAT FLANGE EYELET - Retainers for .025" and .040" dia. pins. Tin plating.

CAT. NO.	DIA. "A"	DIA. "B"	LGTH. "C"	METAL THKNS	NOM. I. D.	DRILL SIZE	BOARD THKNS	MAT.
T102	.052	.080	.105	.006	.040	.059	1/16	COPPER
T103	.036	.071	.062	.006	.025	.041	1/32	COPPER

MANUAL SPRING STAKING TOOLS FOR TERMINALS, EYELETS & PINS

The Vector P96C Spring Staking Tool and Anvil Base provides a simple means of installing small quantities of eyelets and terminals in perforated boards. Any portion of the board is easily reached, even after components have been installed, since the position of the tool is not limited by the jaws of a press or hand tool. The small area and elevated position of the anvil provide clearance for existing, adjacent components. Interchangeable dies and anvils plus adjustable striking force lend great versatility to this tool. The P96C basic tool consists of a spring actuated punch, the tip of which accepts interchangeable die points, a center punch point and an Anvil Base which accepts interchangeable anvils and provides the mass to resist the impact force of the tool. Additional sets of die points and related anvils may be ordered separately as shown in the table below. The manual staking tool die points and anvils may also be used in air or manually operated presses with P96C-2 adapter. Simply install the die point in the adapter which will fit any press chuck which accommodates 1/4" shank. Align anvil with the die point and secure the Anvil Base supplied with the basic P96C tool. This Anvil Base may be ordered separately as Catalog No. P96C-1.

MANUAL SPRING STAKING TOOL

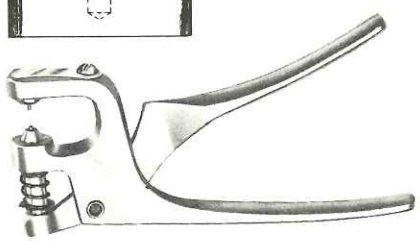


ORDERING INFORMATION

SERIES NO.	DIE POINT	ANVIL	SERIES NO.	DIE POINT	ANVIL
T15 EYELET	D1	A1	K39 PIN	D1	A5
T7 EYELET	D2	A2	T18 TERM.	D1	A9
TF15 EYELET	D3	A3	T19 TERM.	D1	A6
T16 EYELET	D4	A4	T29 TERM.	D5	A10
T11 TERM.	D2	A6	T5 TERM.	D2	
T13 TERM.	D6	A7	T10 TERM.	D2	A12
T14 TERM.	D2	A8			

LOW COST HAND STAKING PLIERS FOR ROLLED FLANGE EYELETS

CAT. NO.	DESCRIPTION
P-126	Pliers w/ anvil and die set for .089" dia. eyelets - 7/8" throat



ALTERNATE HAND STAKING TOOL P-125
LOW COST TYPE

*Trademark

TERMINALS

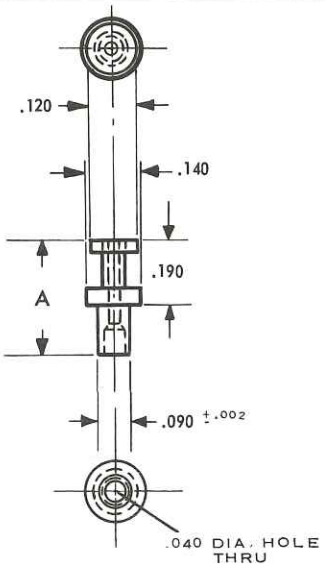
TERMINALS TO FIT .093 DIA. HOLES

TERMINALS

VECTOR TERMINALS ARE LISTED FOR BOTH .093" DIAMETER OR .062" DIAMETERS HOLES. MOST TERMINALS ARE OFFERED IN TWO SIZES FOR USE WITH 1/16" OR 3/32" BOARD THICKNESS.

STAKING TOOLS

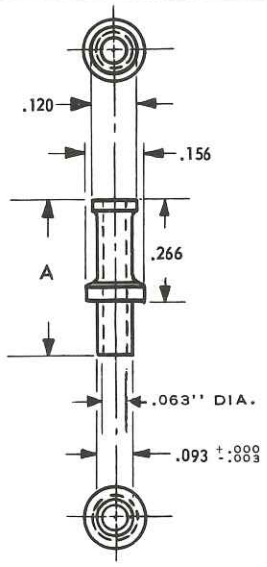
FOR PROPER STAKING, APPROPRIATE STAKING TOOLS ARE LISTED WITH RESPECTIVE TERMINALS. UNLESS OTHERWISE SPECIFIED USE P96C MANUAL STAKING TOOL OR P96C-2 MACHINE STAKING ADAPTER WITH THE DIE POINT AND ANVIL LISTED UNDER EACH TERMINAL. FOR A COMPLETE DESCRIPTION OF THIS SYSTEM SEE PAGE 4.



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T5.0	.299	1/16"
T5.1	.330	3/32"

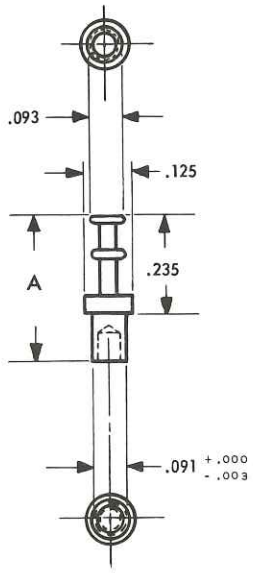
ORDER P96C STAKING TOOL WITH D2 DIE POINT AND A11 ANVIL.



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T10	.371	1/16"
T10.1	.401	3/32"

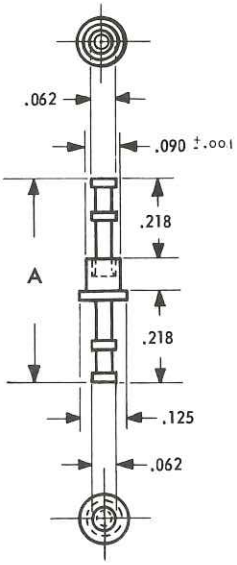
ORDER P96C STAKING TOOL WITH D2 DIE POINT AND A12 ANVIL.



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T11	.340	1/16"
T11.1	.370	3/32"

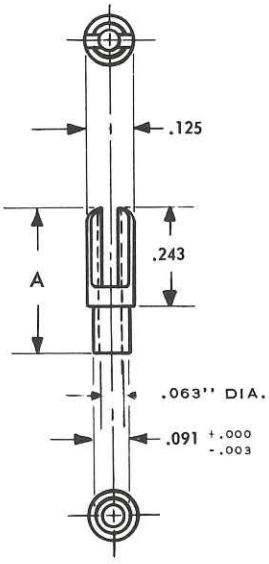
ORDER P96C STAKING TOOL WITH D2 DIE POINT AND A6 ANVIL.



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T13	.520	1/16"
T13.1	.551	3/32"

ORDER P96C STAKING TOOL WITH D6 DIE POINT AND A7 ANVIL.

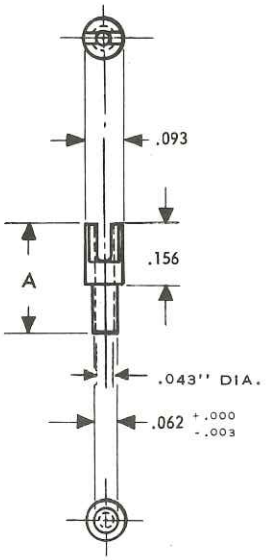


MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T14	.348	1/16"
T14.1	.378	3/32"

ORDER P96C STAKING TOOL WITH D2 DIE POINT AND A8 ANVIL.

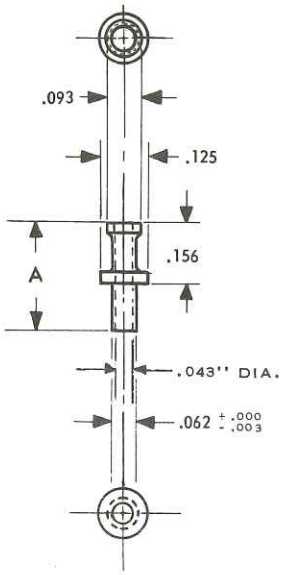
TERMINALS TO FIT .062 DIA. HOLES



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T18	.240	1/16"
T18.1	.271	3/32"

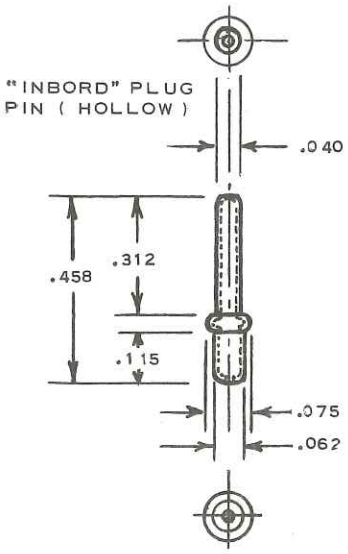
ORDER P96C STAKING TOOL WITH D1 DIE POINT AND A9 ANVIL.



MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T19	.240	1/16"
T19.1	.271	3/32"

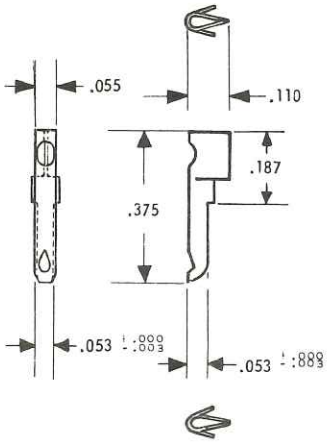
ORDER P96C STAKING TOOL WITH D1 DIE POINT AND A6 ANVIL.



PIN FITS VECTOR-CONN AND 'CUP' RECEPTACLES.
PKG. QTY.: 50 OR 1000

CATALOG NUMBER	MATERIAL for & FINISH	BOARD THICK.
K39A	BRASS, NICKEL GOLD	1/16
K39C	BRASS, TIN PLATE	1/16

ORDER P96C STAKING TOOL WITH D1 DIE POINT AND A5 ANVIL.

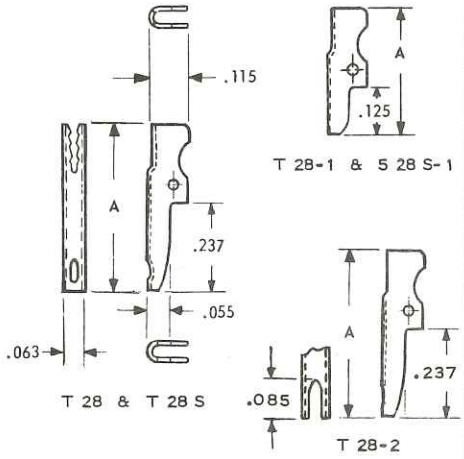


"FLEA" CLIP

MATERIAL: BERYLLIUM COPPER, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T27	.375	ANY

USE P149A INSERTION TOOL.

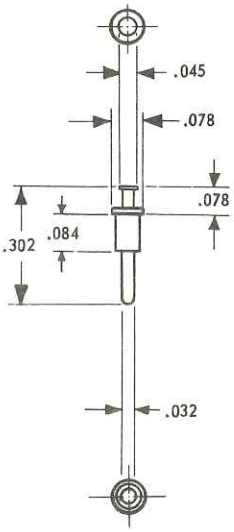


"MINIKLIP"

MATERIAL: BERYLLIUM COPPER, BRIGHT TIN PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T 28	.437	1/16, 3/32
T 28-1	.325	1/16, 3/32
T 28-2	.437	1/16, 3/32
T 28S	.437	1/16, 3/32
T 28S-1	.325	1/16, 3/32

BERYLLIUM COPPER, SILVER PLATED
ORDER P91A HAND INSERTION TOOL.
See Sect. VII, Page 3 for complete description.



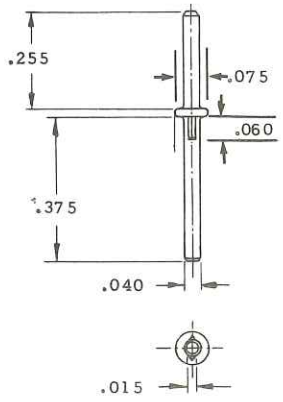
MATERIAL: BRASS, SILVER PLATED.
PKG. QTY.: 100 OR 1000

CATALOG NUMBER	LENGTH for (A)	BOARD THICK.
T29	.302	1/16"

ORDER P96C STAKING TOOL WITH D5 DIE POINT AND A10 ANVIL.

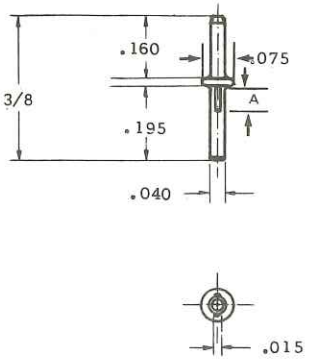
TERMINALS

TERMINALS AND PINS TO FIT .042 DIA. HOLES



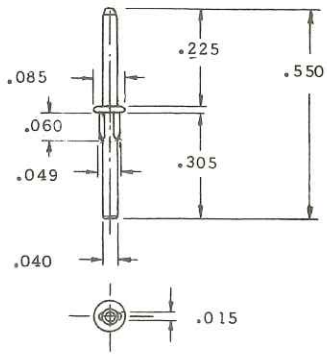
CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K24A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K24C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000
RETAINER		T102

FOR APPLICATIONS AND INSTALLATION TOOLS SEE LOWER RIGHT HAND CORNER.



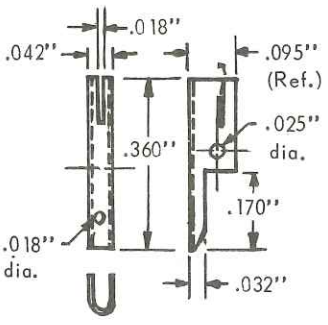
CAT. NO.	MATERIAL & FINISH	A DIM	PKG. QTY.
K31A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	.060	50 OR 1000
K31C	PHOSPHOR BRONZE BRIGHT TIN PLATE	.060	50 OR 1000
K26A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	.080	50 OR 1000
K26C	PHOSPHOR BRONZE BRIGHT TIN PLATE	080	50 OR 1000
RETAINER			T102

FOR APPLICATIONS AND INSTALLATION TOOLS SEE LOWER RIGHT HAND CORNER.



CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K30A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K30C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000
RETAINER		T102

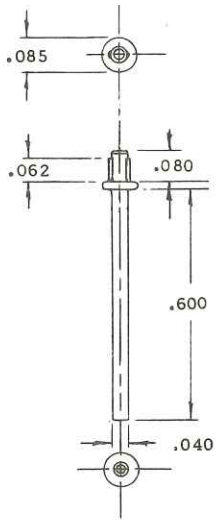
FOR APPLICATION AND INSTALLATION TOOLS SEE LOWER RIGHT HAND CORNER.



"MICRO-KLIP"

CAT. NO.	MATERIAL & FINISH	PKG. QTY.
T42-1	BERYLLIUM COPPER BRIGHT TIN PLATED	100 OR 1000

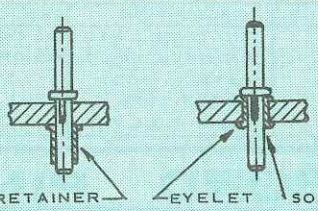
ORDER P149A STAKING TOOL SEE SEC IV, PG. 20A, FOR COMPLETE DESCRIPTION



CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K38A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K38C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000

A RETAINER CANNOT BE USED WITH THIS PIN. FOR INSTALLATION SEE LOWER RIGHT HAND CORNER.

INBORD PIN APPLICATION

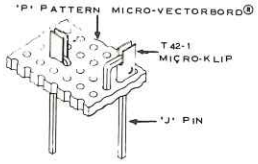


THE .024" DIA. PINS PRESS SECURELY INTO .025" DIA. HOLES. THE .040" DIA. PINS PRESS INTO .042" DIA. HOLES. INSTALLED, THEY PROVIDE EXCELLENT SOLDER POINTS, MATE WITH R23A AND R24B RECEPTACLES OR VECTORCONN CONNECTORS. (SEE SEC. IV, PG. 12 AND SEC.IVA, PG.1-4.)

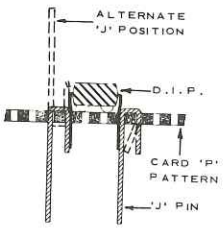
AS SHOWN ABOVE .040" DIA. PINS CAN BE INSTALLED INTO 1/16" DIA. HOLES IF THE T15.23 EYELET IS USED. (SEE SEC. VII PG. 4, FOR ORDERING.) THE RETAINER SHOWN ABOVE WHOSE PART NUMBER IS LISTED UNDER EACH PIN, CAN BE INSTALLED FOR ADDED SECURITY. SOLDERING PROVIDES PERMANENCY WITH BOTH THE EYELET AND RETAINER. MANUAL INSERTION OF PINS IS ACCOMPLISHED WITH THE FOLLOWING TOOLS: .040" DIA. PIN, P133A; .024" DIA. PIN, P131A.

THESE TOOLS ALSO INSTALL THE RETAINER. THE FOLLOWING TOOLS BACK UP THE PINS WHILE THE RETAINER IS BEING INSTALLED. .040" DIA. PIN, P134A; .024" DIA. PIN, P132A.

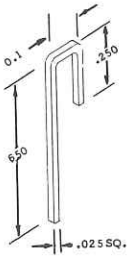
WIRE-WRAP PINS TO FIT .042 DIA. HOLES



SHOWING TWO WAYS OF MOUNTING 'J' PIN WITH T42-1 MICRO-KLIP IN 'P' PATTERN BOARD FOR WIRE-WRAP OR PATCHCORD USE.



SHOWING USE OF 'J' PIN TO ADD WIRE-WRAP OR PATCHCORD FACILITY TO D.I.P. UNITS.

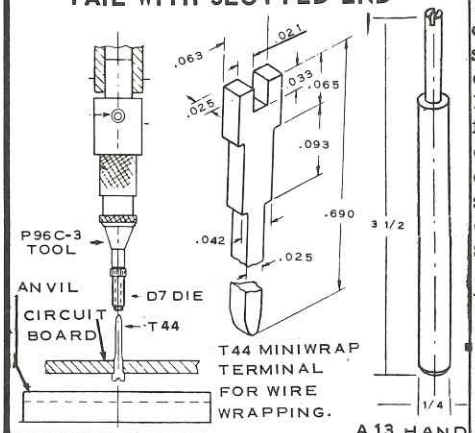


K 32
FIG. 1

K 32 "J" PIN

The "J" pin, as an accessory to the T42-1 Micro-Klip, has a long wire wrap tail which can extend through the same hole in which the Micro-Klip is mounted. The tail can be used with "Daisy-Chain" patchcords or soldered to connecting wires. The "J" also serves to hold the "Klip" firmly in place when soldered. It may be staked to the mounting board by bending over the emergent short end of the "J". See figures. The "J" pin can be installed alone in two holes of approximately .028" diameter size spaced 0.1" on centers. (M pattern Micro-Vectorbord® can be used.) The short leg can then be bent over to stake the pin in place.
Specifications: Phosphor Bronze, .025" square with spacing between legs of 0.1". Plating: Bright Tin (Tintillate).
Supplied in packages of 100 or 1000.

PINS HAVING SQUARE WIRE-WRAP TAIL WITH SLOTTED END

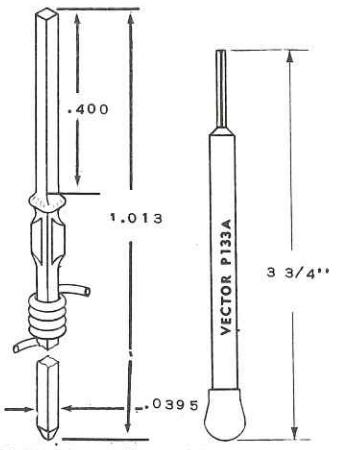


CAT. NO.	DESCRIPTION	PKG. QTY.
T44	PIN/TINTILLATE	100 OR 1000
T44-1	PIN/NKL.& GOLD	100 OR 1000
A13	INSTALL. TOOL	1
P96C-3	IMPACT TOOL	1
HD-10	ANVIL & DIE KIT	1

MINIWRAP PINS

T44 & T46 sq. wire-wrap* pins are single and double ended, respectively. They will stake or solder into .042" dia. holes on 1/16" board and can be placed on .10" ctrs. The tails extend 1/2" and 9/16", respectively, from board surface, permitting five No. 26 AWG wire-wrap connections of six turns each. The T44 slotted end extends .065" above the board and is .025" sq. on the bottom tail only, whereas the T46 end extends 0.40" above the board and is .028" square throughout. TO INSTALL: Push pins into .042" dia. holes with pliers or A13 installing tool for T44, or P133A for T46. (Hold the board on its side or place it in blocks to give clearance for tails.)Tight fit makes staking generally unnecessary. However, the T44 can be staked using the HD-10 Kit and the P96C-3 impact tool. No method for staking T46 pins is now available; but, if copper pads or plated holes are adjacent to the pins, and solder is applied to the tail ends it will hold them in place.
SPECIFICATIONS: Material is phos. bronze with bright tin, "tintillate" plating, or nickle plus gold flash.
*TM Gardener Denver Co.

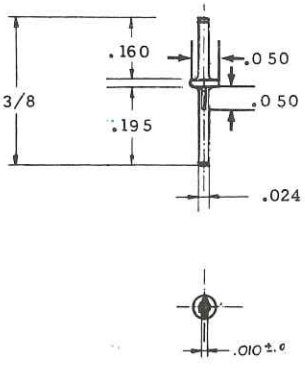
PINS HAVING BOTH ENDS SQUARE WIRE-WRAP



T46 MINIWRAP PIN
P133A INSTALL. TOOL

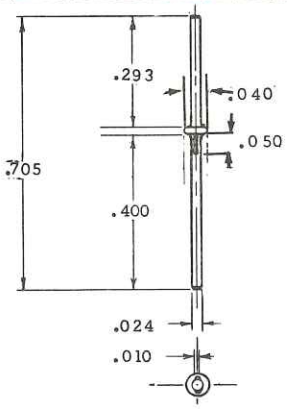
CAT. NO.	DESCRIPTION	PKG. QTY
T46	PIN/TINTILLATE	100 OR 1000
T46-1	PIN/NKL. & GOLD	100 OR 1000
P133A	INSTALL. TOOL	1

INBORD PINS TO FIT .025 DIA. HOLES



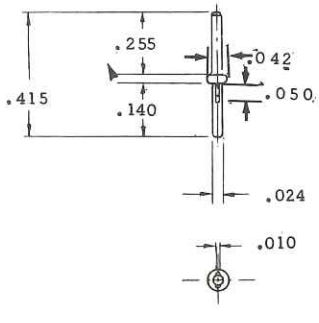
CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K27A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K27C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000
RETAINER		T103

FOR APPLICATION AND INSTALLATION TOOLS SEE PAGE 7.



CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K36A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K36C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000
RETAINER		T103

FOR APPLICATIONS AND INSTALLATION TOOLS SEE PAGE 7.



CAT. NO.	MATERIAL & FINISH	PKG. QTY.
K37A	PHOSPHOR BRONZE NKL PLT, GOLD FL.	50 OR 1000
K37C	PHOSPHOR BRONZE BRIGHT TIN PLATE	50 OR 1000
RETAINER		T103

FOR APPLICATIONS AND INSTALLATION TOOLS SEE PAGE 7.

TERMINALS

VECTOR IMP-CLIPS

(Interconnected Multi-Point Clip Terminals)

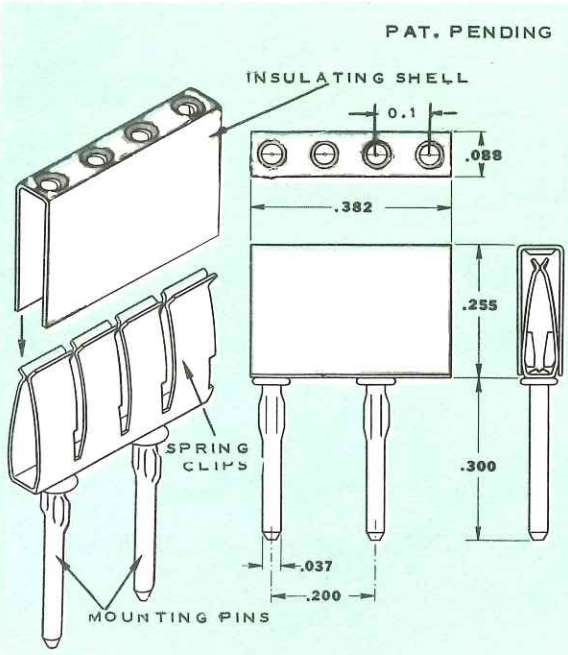


FIG. 1 T45-4 IMP-CLIP

PUT OUR LITTLE IMPS TO WORK FOR YOU!

IMP-CLIPS are designed especially for use in connecting Dual-In-Line integrated packages, as well as transistors and other semi-conductor units and the usual resistors, capacitors and other small circuit elements. They are low in profile, being approximately 1/4" high when inserted in the board.

IMPS ARE SOLDERLESS

IMP-CLIPS are interconnected spring clips, made in groups of four or more (see Fig. 1). Each clip will receive and reliably connect to wires or ribbons having limiting dimensions from .010" (#30AWG) to .032" (#20AWG). With spring points spaced 0.1" in each "quad" and 0.1" between quads, an ideal array for D.I.P. mounting and connection can be obtained on "P" Pattern Vectorbord (see Fig. 2). Bus strips of multi-point clips can be run between groups of clips for the convenient supply of ground or voltage as needed. Patch connections can readily be made by merely inserting the wire tips of approximately .025" diameter in the spring clip points and running from point to point as required.

The P154 Tool should be used for insertion and extraction of the IMP-CLIP.

IMPS ARE VERSATILE

An advantage of the IMP-CLIP is that wires can be inserted either from the top or from the bottom. Where mounting pins are present, two of the bottom holes would thus be shut off. It is generally not desirable for wires to be inserted both from the top and from the bottom in the same spring clip hole, although a wire may go all the way through from top to bottom.

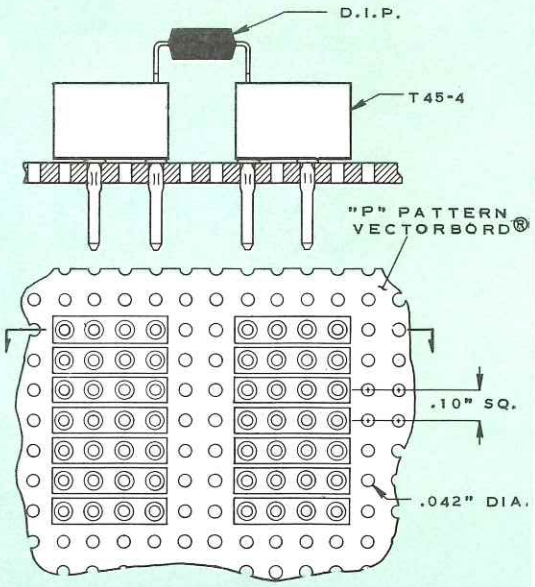


FIG. 2. ARRAY FOR D.I.P. MOUNTING ON "P" PATTERN VECTORBORD

IMPS ARE OF A LARGE FAMILY

IMP-CLIPS are supplied in two general ways: (1) They may be obtained in "quads" (4 in tandem) or in bus strips of 32 for top of board mounting, as shown in Fig. 3. The quad units are furnished with mounting pins spaced 0.2" or more on the bottom which "snap" into .042" diameter holes of Vector "P" pattern Micro-Vectorbord. The shells are coated with insulating material which protects against short-circuit between adjacent units. Several other colors can be supplied for the coating on special order.

IMPS ADAPT TO PRINTED CIRCUITS

When mounted on printed circuit boards production models can be simulated. In this arrangement the components, such as D.I.P. units, transistors, resistors, capacitors, and the like, mount on the top side and the printed connections would be on the bottom as is conventional. Connections to the printed conductors would be made using wire straps from the clips to the copper foil. (All holes would line up to pass connections.)

IMPS ARE RELIABLE

Since the main spring clip is protected by a metal shell which limits the maximum deflection, no damage can result with any normal use of the terminal. Wire larger than .032" in diameter cannot enter the hole at the top. Thus the number of insertions which should be obtainable with good contact results is very large-- in the thousands.

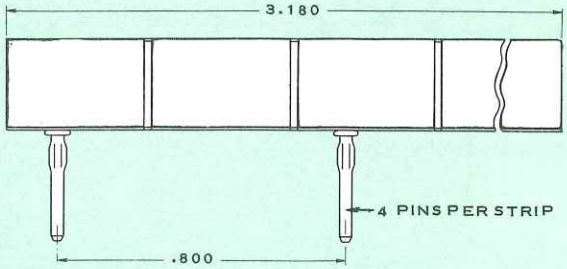


FIG. 3. T45-32 IMP-CLIP BUS STRIP

SPECIFICATIONS:

Spring Clip: Phosphor bronze, tin plated.
Shell: Brass, insulated outside.
Insulation dielectric strength: 3000 VDC at 60 Cyc.
Current rating: 5 amps.

ORDERING INFORMATION

CAT. NO.	DESCRIPTION	PKG. QTY.
T45-4	TERMINAL CLIPS, QUAD, SEE FIG. 1	16
T45-32	BUS STRIP, 32 CONTACTS, SEE FIG. 3	2
P 154	TOOL FOR INSERTION OF IMP-CLIP	1

DIRECT POSITIVE PHOTO-RESIST Etched Circuit Kits

QUALITY ETCHED CIRCUITS IN 1 HOUR START TO FINISH

- Makes Complicated Circuit Patterns Easy
- Reusable Etching Container
- Repeatability - Make One or 100
- Minimum Undercutting
- Easy To Prepare Artwork With Direct Positive - No Negative To Be Made

32XA DELUXE POSITIVE PHOTO-RESIST CIRCUIT KIT, $24.95

ETCHED CIRCUITS IN MINIMUM TIME

Vector Direct Positive Photo-resist kits are designed for producing sharply detailed etched circuits with minimum delay in the laboratory, shop or school. No photographs or special darkrooms are required. The kit is built around 1 oz. copper clad laminate which has been pre-coated with" positive acting " photo-sensitive etch resist. This kit differs from the previous Vectoresist kits in that several duplicate boards can be easily made from one master artwork rather than necessarily constructing new patterns on each copperclad board.

MATERIALS FOR WIDE VARIETY OF CIRCUITS

Kits contain artwork patterns and materials to make a wide variety of etched circuits--the image of the desired conductor paths, pads, connectors, etc., is merely applied on the mylar film provided in the kit. Most of the commonly used printed circuit configurations, such as I.C. and transistor pads, connector patterns, dots, lines and block areas, are provided on adhesive backed transparencies in 1:1 scale for application on the mylar also provided in kit. Once the desired circuit is on the mylar master, it is placed on the sensitized copperclad board, then exposed under a photo-flood lamp or other suitable light source such as bright sunlight. Developing is done quickly with the tray and solution provided.

LEAKPROOF ETCHING TRAYS

Rapid etching with minimum undercutting is made by using the closable plastic box and plastic etching bags provided in the kit which may be vigorously shaken without leakage.

TWO SIZES AVAILABLE

The only materials not supplied are water, razor blades, a safe light and a light for exposing the boards. A common yellow bug light is a good safe light. A No. 2 photo flood light with reflector is recommended for exposing, but sunlight will also work satisfactorily.

PRODUCE ANY NUMBER OF IDENTICAL BOARDS

The basic 32X Sampler Kit provides materials for 2 completely etched circuit boards. The De Luxe Kit has a larger assortment of materials--enough for 5 circuit boards. See list of contents for sizes, (overleaf).

ADHESIVE BACKED ARTWORK PATTERNS SUPPLIED IN KITS AND AVAILABLE SEPARATELY (See Overleaf)

Transparencies with pre-printed patterns are cut out as blocks with a razor blade or scissors and pressed onto the master. Sheet sizes are 5" x 6 1/2 " .

CATALOG NUMBER	DESCRIPTION	SEE FIG. OVERLEAF
R706-1	CIRCULAR PADS, STRAIGHT LINES, 2 SETS .156 SPACED CONTACT TABS FOR GENERAL CIRCUITRY.	FIG. 1
R706-2	PADS FOR D.I.P.'S, FLAT PACKS AND TRANSISTORS.	FIG. 2
R705-1	PADS FOR TRANSISTOR AND TO-5' S WITH 8, 10, AND 12 LEADS.	FIG. 3
R705-2	SIMILAR TO R706-2 BUT LARGER QTY.	FIG. 4

TRANSFER ARTWORK PATTERNS

R322 has " rub on " patterns for pads, lines and .156" centered connector tabs. Patterns are in resist ink and can also be used to patch defects or add to developed boards prior to etching. (See Vectoresist data, Sec. IX, p. 8). These also can be used for immediate etch without photo-resist coating.

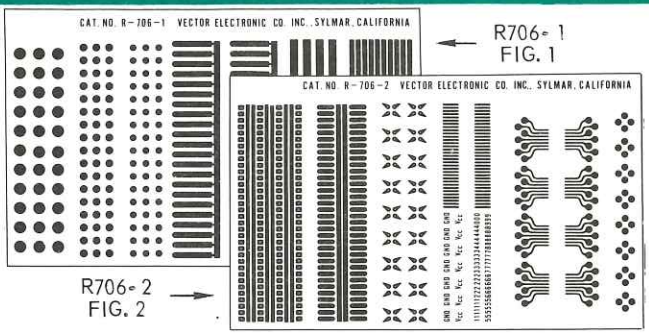
32X POSITIVE PHOTO-RESIST ETCHED CIRCUIT KIT, $8.95

EXPERIMENTER'S KITS

CONTENTS OF KITS

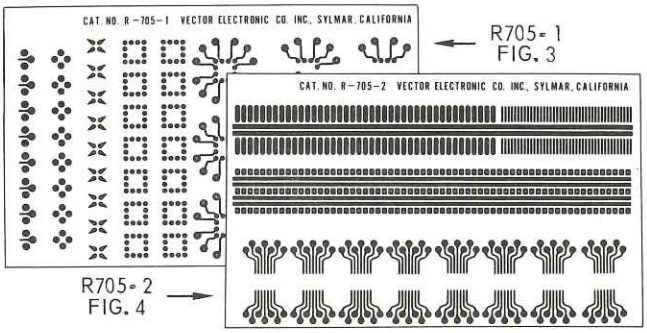
CATALOG NO.	DESCRIPTION	QTY. IN KIT 32X	32X'A
CU 90/80-1R	7.99 X 9.0 X 1/16 BOARD*		1
CU 65/45-2R	4.5 X 6.5 X 1/16 BOARD *	1	1
CU 65/45-1R	4.5 X 6.5 X 1/16 BOARD *		1
CU 70P45-2R	4.5 X 7 X 1/16 BOARD *		1
CU 45/27-1R	2.73 X 4.5 X 1/16 BOARD *	1	1
0079-02-63	BOX, CLEAR PLASTIC	1	
0079-02-62	BOX, CLEAR PLASTIC		1
2594 A	ETCHANT, 125 GR. BAG AMMONIUM PER.		1
2594 D	ETCHANT, 60 GR. BAG AMMONIUM PER.	2	4
0088-21-15	DEVELOPER, 1 OZ. BOTTLE	1	
0088-21-16	DEVELOPER, 8 OZ. BOTTLE		1
M5430-4-1	GLASS PLATE, 1/8 X 5.0 X 7.0	1	
M5430-4-2	GLASS PLATE, 1/8 X 8.0 X 9.0		1
0086-25-20	MYLAR, CLEAR, .005 X 5.0 X 7.0	1	2
0086-25-21	MYLAR, CLEAR, .005 X 8.0 X 9.0		1
M5430-3-1	MASK CUTTING FILM, .005 X 5.0 X 7.0	1	2
M5430-3-2	MASK CUTTING FILM, .005 X 8.0 X 9.0		1
0081-42-16	TAPE, BLACK CREPE, .062 X 60" ROLL	1	1
0079-41-1	BRUSH, ACID TYPE	1	1
3082	BRUSH AND TOUCH UP INK	1	1
0082-33-4	BURNISHING TOOL, WOODEN		1
R706-1	ARTWORK TRANSPARENCIES (SEE FIG. 1)	1	
R706-2	ARTWORK TRANSPARENCIES (SEE FIG. 2)	1	
R705-1	ARTWORK TRANSPARENCIES (SEE FIG. 3)		1
R705-2	ARTWORK TRANSPARENCIES (SEE FIG. 4)		1
R322	TRANSFER ARTWORK (SEE SEC. IX, P. 8)		1
R173H	GRID PAPER (SEE SEC. II, P. 2)	1	2
IN-134	INSTRUCTION SHEET	1	1

* SEE ORDERING TABLE BELOW FOR COMPLETE DESCRIPTION



R706-1 FIG. 1

R706-2 FIG. 2



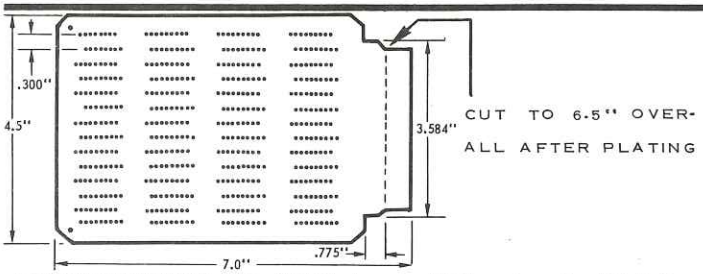
R705-1 FIG. 3

R705-2 FIG. 4

DIRECT POSITIVE PHOTO-RESIST COATED BOARDS AVAILABLE OUTSIDE OF KITS

CATALOG NUMBER	LENGTH	WIDTH	THICKNESS & MATERIAL	NOTCHED FIG. 5	COATED COPPER CLAD	HOLE PAT. FIG. 5	PKG. QTY.
CU90/80-1R (FORMERLY M5430-2-1)	9.0	7.99	1/16 PHENOLIC	NO	1 SIDE	NO	5
CU65/45-2R (FORMERLY M5430-2-2)	6.5	4.5	1/16 PHENOLIC	NO	2 SIDES	NO	5
CU65/45-1R (FORMERLY M5430-2-3)	6.5	4.5	1/16 PHENOLIC	NO	1 SIDE	NO	5
CU45/27-1R (FORMERLY M5430-2-4)	4.5	2.73	1/16 PHENOLIC	NO	1 SIDE	NO	5
CU70P45-2R (FORMERLY M5430-1-2)	7.0	4.5	1/16 PHENOLIC	NO	2 SIDES	YES	5
CU45/30WE-1R	4.5	3.0	1/16 EPOXY GLASS	NO	1 SIDE	NO	3
CU65/27WE-1R	6.5	2.73	1/16 EPOXY GLASS	NO	1 SIDE	NO	3
CU70/45WE-1R	7.0	4.5	1/16 EPOXY GLASS	NO	1 SIDE	NO	3
CU70/45WE-1RN	7.0	4.5	1/16 EPOXY GLASS	YES	1 SIDE	NO	3
CU70/45-2RN	7.0	4.5	1/16 EPOXY GLASS	YES	2 SIDES	NO	3
CU70P45WE-1R	7.0	4.5	1/16 EPOXY GLASS	NO	1 SIDE	YES	3
CU70P45WE-1RN	7.0	4.5	1/16 EPOXY GLASS	YES	1 SIDE	YES	3
CU159/80WE-1R	15.85	7.98	1/16 EPOXY GLASS	NO	1 SIDE	NO	2

NOTE: FOR UNCOATED VECTORBORD,® SEE SECTION II, PAGE 2.



CONTOUR BOARDS with .042" holes on 0.1" centers for D.I.P.'s
FIG. 5

SPECIFICATIONS

Phenolic Paper Laminate - Copper Clad 1/16" Thick

NEMA Grade FR-2. 1 oz. copper clad .0014" thick, one side or two sides. Most economical of copper clad laminates. Color: Natural (cream or tan). Maximum operating temperature 250° F. Fire retardant.

Epoxy Glass Laminate - Copper Clad 1/16" Thick

Type FL-PH per MIL-P-13949D, 2 oz. copper clad .0028" thick, one or two sides. Color: Tan. Maximum operating temperature 300° F. Fire retardant.

PHOTO-RESIST LINE PATTERNS

CAT. NO.	DESCRIPTION	PKG. QTY.
3082	BRUSH AND TOUCH UP INK	1
R706-1	ARTWORK TRANSPARENCIES (SEE FIG. 1)	3
R706-2	ARTWORK TRANSPARENCIES (SEE FIG. 2)	3
R705-1	ARTWORK TRANSPARENCIES (SEE FIG. 3)	3
R705-2	ARTWORK TRANSPARENCIES (SEE FIG. 4)	3
R322	VECTORESIST TRANSFER PATTERNS (SEE SECTION IX, PAGE 8)	1
R173H	LAYOUT GRID PAPER (SEE SEC. II, P. 2)	50

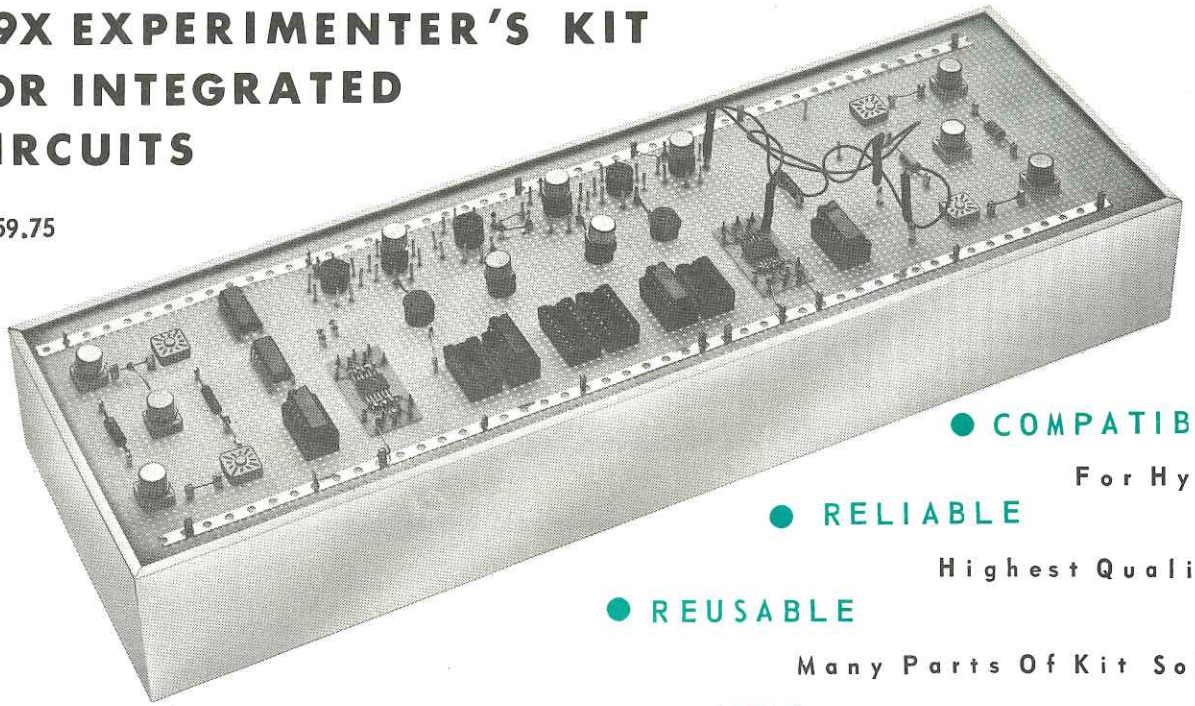
ETCHING SUPPLIES

CAT. NO.	DESCRIPTION	PKG. QTY.
0079-02-63	ETCHING BOX, CLEAR PLASTIC	1
0079-02-62	ETCHING BOX, CLEAR PLASTIC	1
2594A	ETCHANT, 125 GRAMS, AMMONIUM PERSULPHATE	1
2594D	ETCHANT, 60 GRAM, AMMON. PER.	1
2594E	ETCHANT, FERRIC CHLORIDE, 1 GAL	1
2594F	ETCHANT, FERRIC CHLORIDE, 1 PT.	1
0088-21-16	DEVELOPER, 8 OZ. BOTTLE	1

EXPERIMENTER'S KITS

29X EXPERIMENTER'S KIT FOR INTEGRATED CIRCUITS

$59.75



MOUNTING SURFACE 4.5" × 14"

- **COMPATIBLE** — For Hybrid Use
- **RELIABLE** — Highest Quality Parts
- **REUSABLE** — Many Parts Of Kit Solderless

QUICK SET-UP OF INTEGRATED CIRCUIT PACKAGES

This new integrated circuit kit provides quick, easy means of interconnecting most configurations of integrated circuit packages for experimentation. The breadboard mounting surface is prepunched "P" pattern Micro-Vectorbord* having .042" diameter holes on 0.10" grid spacing supported by 2" high Vector aluminum Frame-Loc Rails. The Frame-Loc Rails may be quickly assembled to hold breadboards normally mounted in top groove, but also insertable in center groove so that covers can be inserted top and bottom. The single breadboard is easily accessible for work on both sides without damage to delicate components.

USE OF SOCKET FOR DUAL-IN-LINE I.C.P.

14- and 16-Pin D.I.P. sockets having wire-wrap tabs that pass through existing breadboard holes are supplied. Retainers FA2 and FA3 hold sockets to board. For connection tabs may be (a) soldered, (b) wire-wrapped, or (c) patched with "Daisy Chain" patchcords.

MOUNTING DUAL-IN-LINE I.C.P. WITHOUT SOCKET

D.I.P. leads pass through existing holes for connection to circuit wires. D.I.P.'s are held in place by FA2 or FA3 Retainers. Another arrangement (described in kit instructions) involves soldering D.I.P. leads to T42-1 Micro-Klip Terminals.

MOUNTING TO-5 TYPE I.C.P.'S AND TRANSISTORS

MP-2 wafers guide leads from a round pattern into a rectangular one fitting "P" pattern Vectorbord. Wires emerging from reverse side are connected to tie points using K24C Push-In Pins or T42-1 Micro-Klips.

Transistor leads fit into "P" pattern Vectorbord holes and connect as above. Transistor socket tabs supplied in kit fit Vectorbord holes and are readily wired on reverse side.

*Trademark

ATTACHMENT OF SOCKETS FOR ROUND TO-5 TYPE INTEGRATED CIRCUITS

I.C.P. round sockets, Catalog Nos. RA10-1 and RA88-1, supplied in the kit, have radially flared socket leads. This permits all connections to the socket tabs to be made on the top side of the breadboard.

ATTACHMENT OF FLAT PACKS WITH .05" SPACED LEADS

Flat-Pak Adapter Plates having slotted terminals and Push-in Pins can be used for connecting (.05 spaced leads) flatpacks (solder). Plate attaches to main board by Push-in Pins which can also be used for tie points or to patch with "Daisy Chain."

USE OF SOLDER-THRU COATED WIRE

This wire (in kit) can be quickly connected from point to point without having to strip insulation. The wire may be wound around the pins of sockets or other terminals, and when soldered the insulation melts and facilitates the soldered joint. Plain tinned copper wire is also supplied with kit.

USE OF "DAISY-CHAIN" CONNECTIONS

For quick experimental connections, the "Daisy Chain" method is used. This provides insulated spring receptacles wired in tandem, 5" apart, so that multiple connections can quickly be made to either .025" square wire-wrap type tabs (as used on D.I.P. sockets) or to .025" -.032" diameter round wires. The "Daisy Chain" receptacle will not fit over the K24C Plug-In Pins but adaption to these can be made by use of the 1752A-33 contact whose tail fits the "Daisy Chain" and whose receptacle fits the .040" pin diameter.

USE OF INBORD PINS (K24C)

These are .040" diameter round pins which mount tightly in .042" diameter holes of board. They may be used as contact points or test points to which leads attach. Or they may be used as plugs mating with Vectorconn receptacles. Interconnections can be quickly made between .025" square pins and .040" diameter round pins, or between .040" pins using the 1745-40 crimp contact.

USE OF T42-1 MICRO-KLIPS

This unique terminal providing a slot on one side, projecting tab on other side, and through holes, needs only to be pushed into the .042" holes wherein it holds firmly. It is highly useful for connecting a variety of lead wires of semiconductors and discrete components. An installing tool for these is also supplied. When mounted at 45° to board side, it serves as an offset terminal for flat-pack mounting. K-32 "J" Terminals (.025" sq.) insert in Micro-klips providing wire wrap tab and use of "Daisy-Chain" patching.

MISCELLANEOUS OTHER HARDWARE

This consists of bus strip, extracting tool for D.I.P's, Vectorbord*, lay-out paper, etc., per the list below:

*Trademark

I.C.P. AND TRANSISTOR SOCKETS

RA10-1
I.C.P. Socket
Fig. 2

RA9
Transistor Socket
Fig. 1

CONTENTS OF KIT

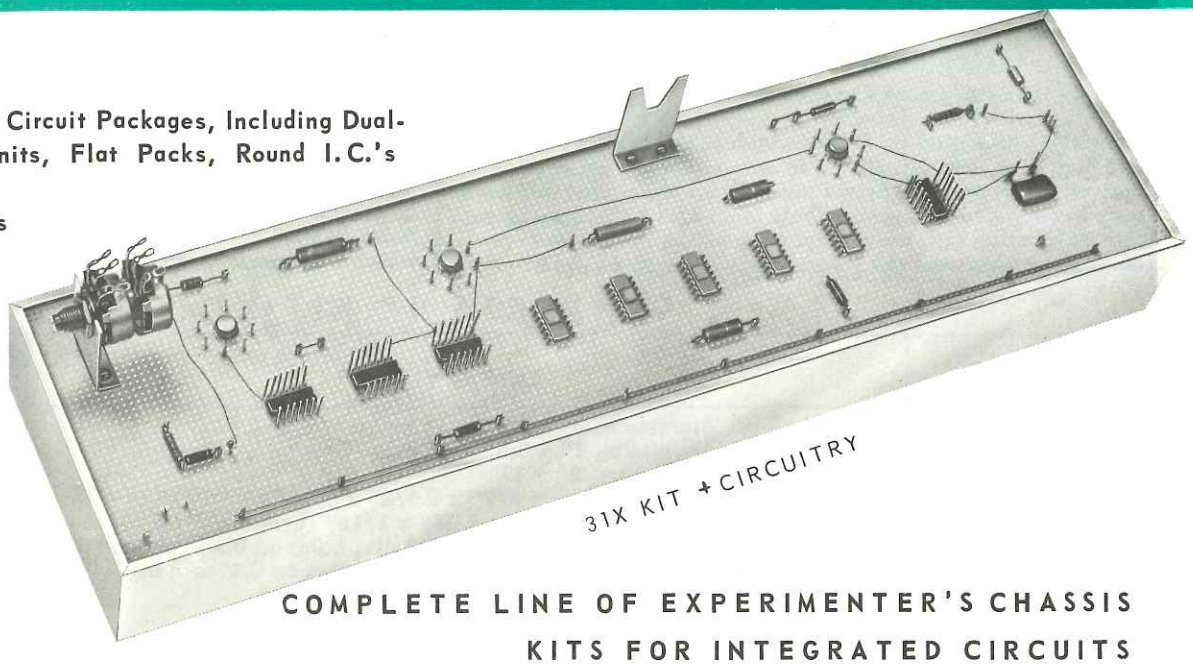
ITEM NO.	CATALOG NO.	DESCRIPTION	QTY. IN KIT	ILLUSTRATION INDEX
1.	138P42-062EP	Board "P" Pattern Perforated 1/16"x4.5"x13.9" Epoxy Paper	1	See Sec. II, p.5
2.	SR2-46-062	Side Rail, Alum. & Hdwe., 2"x4.61" Mitred Ends, Clr. Anodize.	1 pair	See Sec. V, p.6
3.	SR2-140-062	Side Rail, Alum. & Hdwe., 2"x14" Mitred Ends, Clr. Anodize.	1 pair	See Sec. V, p.6
4.	T120-1	Contacts, "Daisy Chain" #26 Gage Wire, Vinyl, Contacts Spaced 5", Nkl. Plt. & Gold Flash	1 Reel of 50	See Sec. IV, p. 20B
5.	2323A-26-1	Wire #26 Gage, Bare Tinned Copper	50'	Not Illus.
6.	2323A-32-2	Wire #32 AWG, Copper Wire, Solder-Thru Insulation	20'	Not Illus.
7.	K32	Terminal .025" Sq.x.65" lg., Phos. Bronze, Tinned.	50	See Sec. VII, p.8
8.	T42-1	Terminals Micro-Klip, Cpr., Tin Plt.	200	See Sec. IV, p. 20A
9.	P149A	Tool for installing T42-1 Term.	1	Not Illus.
10.	* 1745-40	Contact Lug, For .040" Dia. Pins, crimp wire, Phos. Brz., Tin Plt. Provides wire crimp contacts for K24C Pin.	25	Not Illus.
11.	1752A-33	Contact for .040" Dia. pins, has flat tabs to adapt "Daisy Chain" to K24C Pin.	50	Not Illus.
12.	T107	BUS STRIP, .018"X.080"X14" .042"HOLES, 0.1" CENTERS,	10	See Sec. II, p.7
13.	K24C	Inbord Pin, Push-In, .040" Dia. x.650" lg. Phos. Brz., Tin Plt.	50	See Sec. V, p.12
14.	P-150	Tool, D.I.P. Extractor Type	1	See Sec. V, p. 20B
15.	P-133	Tool, Install K24C Pins 1/4"x3 7/16" Cad. Plt.	1	See R466, Sec.VII, p. 6
16.	R714	Socket, D.I.P., 14 contacts Wire Wrap Casting-Glass Nylon, Contacts-Phos. Bronze, Nkl. Plt. & Gold Flash.	5	See Sec. IV, p.20B
17	R716	Socket, D.I.P. Dual-in-Line, 16 contacts- Wire Wrap, Casting-Glass Nylon, Contacts-Phos. Brz., Nkl. Plt. & Gold Flash.	2	See Sec. IV, p.20B
18.	RA9	Socket, Transistor Type, TO-5 Case, 4 leads, No Saddle.	4	See Fig. 1
19.	RA88-1	Socket, 8 Lead Type TO-5 Case I.C.P. .376" Dia.x.296" Thk. Casting-Diallyl Phthalate, Contacts-Beryl. Cpr., Gold Fl.	4	Not Illus.
20.	RA10-1	Socket-10 Lead Type, TO-5 Case .375" Dia.x.296" Thk. Casting-Diallyl Phthalate, Contacts-Beryl. Copper, Gold Flash.	2	See Fig. 2
21.	MP-2	Mounting Pads, 12 holes, Adapt Rd. I.C.P. to Rect Board .156"Thk.x x.390"W.x.390"lg., Nylon.	10	See Sec. IV, p.20A
22.	FA2	Retainer for R714 (14 Pins), Phosphor Brz.	20	Not Illus.
23.	FA3	Retainer for R716 (16 Pins), Phos. Brz.	10	Not Illus.
24.	——	Board, "P" Pattern, .042" Dia. Holes, Approx. 15 sq. Inches (Random pieces)	15 sq. inches	Not Illus.
25.	——	Board "P" Pattern .042" Dia. Holes, 2 oz. copper-one side, Approx. 15 sq. inches (Random pieces)	15 sq. inches	Not Illus.
26.	R173H	Layout paper, 8.5"x11",.100"x.100" Grid, for Circuit Layout.	10	Not Illus.
27.	FPA-14	Flat-Pak Adapter Terminal Plate	4	See Sec. IX, p.16

*A WIRE CRIMPING TOOL FOR THE 1745-40 CONTACT IS AVAILABLE AS NO. P115.

AVAILABLE FROM:

FOR BREADBOARDING

- Integrated Circuit Packages, Including Dual-In-Line Units, Flat Packs, Round I.C.'s
- Transistors
- Discretes



COMPLETE LINE OF EXPERIMENTER'S CHASSIS KITS FOR INTEGRATED CIRCUITS

COMPACT ASSORTMENTS FOR I.C. MOUNTING

The 30X Kit is similar to the popular 20X Kit except that it is used with integrated circuits and other semi-conductor networks rather than vacuum tube components. The more compact 30XA Kit provides the lowest cost for breadboarding integrated circuits and related devices. An I.C. mounting surface of Micro-Vectorbord® with supports and Micro-Klip Terminals are provided.

30X KIT WITH 8.6" X 4.6" FRAME-LOC CHASSIS

SAVE SET-UP TIME

The Vector Integrated Breadboard Kits use "P" Pattern Micro-Vectorbord which has .042" diameter holes spaced 0.1" on a rectangular grid. The 30XA Kit uses wood supports for mounting the board. The 30X and 31X Kits use the slots of the Frame-Loc aluminum rails for mounting the breadboard, usually near the top of the rails. If preferred, the breadboard can be mounted centrally in the frame so that it can be completely enclosed with accessory covers.

SAVE COMPONENT MOUNTING TIME

The "P" Pattern Micro-Vectorbord hole pattern allows leads of Dual-In-Line Packages (D.I.P.'s) or the leads of accessory D.I.P. sockets to pass directly through the matching holes. Connections may be soldered directly to the emergent tabs, or terminals may be used to make connection changes more conveniently. K32 "J" Terminals, with square pins for wire wrapping, may be inserted in the same holes with the D.I.P. tabs to extend on either or both sides of the breadboard for soldered or wire wrapped leads or for "push-on" patchcords, Part No. T-120. Or, Vector "Micro-Klip Terminals (T42-1) may be inserted in the holes and D.I.P. tabs may be inserted in their tails for convenient mounting.

QUICK CONNECTION OF FLAT PACKS

Flat packs may be connected on the breadboard by use of accessory Flat-Pak Adapters, FPA-14, to which the flat pack tabs may be soldered. Furnished T42-1 Terminals which may be installed in the pads serve to plug the adapter into the "P" Pattern Micro-Vectorbord and to provide connection points for leads. The Flat-Pak Adapters do not come with the kits and should be ordered as an accessory.

30XA KIT, 8.5" X 4.5", WITH WOODEN CHASSIS SUPPORTS

CONVENIENT I.C. MOUNTING

Dual-In Line Integrated Circuit Packages may be fastened to the board with leads either up or down, with Neoprene Rubber Adhesive dispensed from tube which is supplied in the 31X and 30X Kits. If terminals are to extend upward connections may be made topside. Round tupe integrated circuit packages may be mounted by forming their leads into a rectangular pattern or by using accessory adapter mounting pads, MP-1 or MP-2. The Neoprene described above can also be used allowing terminals to face upward. Transistors of the TO-5 or TO-18 type may have their leads pushed through the matching holes of the "P" pattern board to hold them in place.

MICRO-PATTERN BUS STRIPS AVAILABLE

Bus Strip T107 provides a convenient means for applying power or ground to various points on the board. It has .042" diameter holes on 0.1" centers. Brackets are supplied in the 31X Kit which will mount nearly all sizes of pots and switches.

CONTENTS OF KITS

CATALOG NO.	DESCRIPTION	QUANTITY IN KITS 31X	30X	30XA
SR2-46-062-1	Side Rail, Aluminum, 2" x 4.6"	2	2	
SR2-86-062-1	Side Rail, Aluminum, 2" x 8.6"		2	
SR2-171-062-1	Side Rail, Aluminum, 2" x 17"	2		
84P44-062EP	Vectorbord®, "P" Pattern, 4 1/2" x 8 1/2" x 1/16"		1	1
169P44-062EP	Vectorbord, "P" Pattern, 4 1/2" x 17" x 1/16"	1		
T107	Bus Strip, 14" long, "P" Pattern, .042" dia. holes on 0.1" centers	3		
T107-1	Bus Strip, 7" long, "P" Pattern, .042" dia. holes on 0.1" centers		2	
T42-1	Terminals, Micro-Klip, copper, tin plated	100	100	100
P149	Installation Tool for T42-1 Terminal	1	1	1
K24C	Inbord Pins, .040" diameter, phosphor bronze, tin plated	50		
K32	"J" Terminals, .025" square x .65" long, phosphor bronze, tin plated	50	50	
2323A-26-1	Wire, Bare Tinned, Copper, #26	50 ft.	50 ft.	
2323A-32-2	Wire, Belsol solder thru insulation, #32	20 ft.	20 ft.	
0090-47-5	Neoprene Rubber Compound	1	1	
B20F	Bracket, L type, for pot and switch mounting	2		
SC4-7	Bracket Mounting Fasteners, 4/40 x 1/4 Rd. Hd. Screws	4		
W5-2	Split Lockwasher, #5	4		
NT4-2	Small Pattern 4/40 Hex Nut	4		
R173H	Layout Paper	6	2	
IN-122	Instruction Sheet	1	1	
IN-123	Instruction Sheet			1
BR50	Corner Brackets to assemble Side Rails	16	16	
M-5345-1	Wood Mounting Blocks, 8.5" x 1" x 3/8"			2
1120-83	Escutcheon Pins, Brass			15

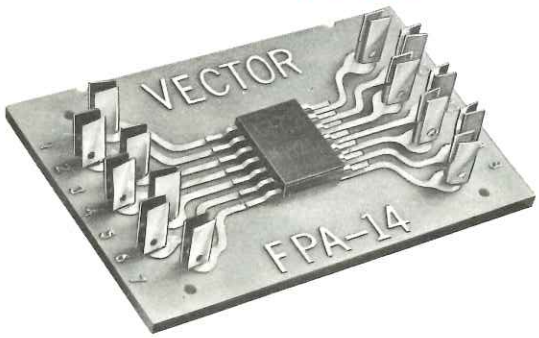
EXPERIMENTER'S KITS

FLAT PACK ADAPTERS FOR USE WITH 'P' PATTERN MICRO-VECTORBORDS

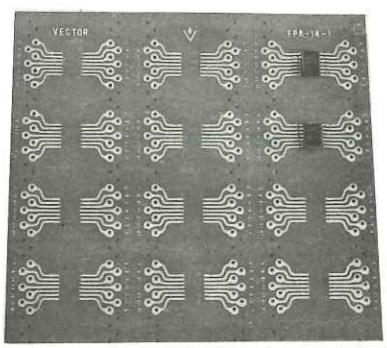
The Vector FPA-14 Flat Pak Adapter provides a convenient, inexpensive method of mounting standard 14 lead flat packs to Vector "P" pattern perforated boards and Plugbords. The T42-1 Terminals are installed into the adapter pad holes, and the terminal ends which extend through the bottom are pressed into the "P" Pattern Micro-Vectorbord® to mount the adapter to the board.

Fourteen of the T42-1 Terminals furnished with the adapter should be installed as shown in the illustration, with the open end of each terminal facing away from the center of the adapter. The P149 or P149A insertion tool should be used to install the terminals. To insure firm connection, each terminal should be soldered to the adapter pad.

The FPA-14-1 Flat-Pak Adapter provides 12 P.C. patterns for mounting flat packs on one board to provide quicker installation. This board can be easily mounted in 4.5" wide Vector-Pak Cases by sliding it into the grooves of the cases.



FPA-14 FLAT-PAK ADAPTER



FPA-14-1 FLAT-PAK ADAPTER

ORDERING INFORMATION

CATALOG NO.	DESCRIPTION	PKG. QTY.
FPA-14-Pkg. 4	1" x 1.6" adapter for 14-lead flat pack. Epoxy Paper P.C. board.	4
FPA-14-1	4.8" x 4.5" adapter for twelve 14-lead flat packs. Epoxy Paper P.C. board.	1

Issue Date JUNE 4 1971

Cancels Sheet Dated MAY 1 1971

⬆ Increase ⬇ Decrease N New D Discontinued	This reprinting covers: N & D only.

GENERAL PRICE LIST

12460 Gladstone Ave.
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

VECTOR Electronic Co., Inc.

Number	Quantity	Selling Price
0077-01/15-Pkg. 10*		$ 1.11
0077/50/1*		.06
D 0077/50/2* (6/71)		
0077/50/3*		.06
0079-02/5		.45
N 0079-41-1-Pkg. 12		.75
N 0081-42-16-Pkg. 5		2.31
N 0086-25-20-Pkg 5		1.35
N 0086-25-21-Pkg. 5		1.49
N 0088-21-15		.50
N 0088-21-16		1.47
0251-210-01 - Pkg. 100		1.02
D 0311-91-19 - Pkg. 25 (6/71)		
0677/12-Pkg. 100*		8.25
0677/12-Bulk*	1000-4999	62.46/M
0865-1114/.406	1-499	.04
0865-1507/.313	1-499	.04
0865-1513/.500	1-499	.04
0911-3-Pkg. 100*		2.18
D 2AA2-Pkg. 25 (6/71)		
4/40-U-Pkg. 50		1.48
4/40-U-Bulk	1000	23.16/M
	5000	20.84/M
	25000	18.76/M

Number	Quantity	Selling Price
4Z-U-Pkg. 50		$ 1.38
4Z-U-Bulk	1000	18.85/M
	5000	16.97/M
	25000	15.84/M

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O.E.M.

Number	Selling Prices 1-49	50-199	200-499	500-999
6-12	$ .63	$ .57	$ .44	$ .42
6-A-12T	1.22	1.10	.85	.82
6-A-12T-440	1.18	1.06	.83	.79
6-H-12	.59	.53	.41	.40
6-M-6T	.72	.65	.50	.48
6-N-6T	.72	.65	.50	.48
6-O-6T	.61	.55	.43	.41
8-12	.66	.59	.46	.44
8-12C	.75	.68	.53	.50
8-A-12T	1.23	1.11	.86	.82
8-M-9T	.79	.71	.55	.53
8-M-12T	.82	.74	.57	.55
8-N-9T	.79	.71	.55	.53
8-N-12T	.82	.74	.57	.55
8-O-9T	.68	.61	.48	.46
9-A-12T/440	1.23	1.11	.86	.82
10-12	.70	.63	.49	.47
10-12C	.78	.70	.55	.52
10-MB-12T	.93	.84	.65	.62
10-NB-12T	.93	.84	.65	.62
10-O-9T	.72	.65	.50	.48
10-O-12T	.76	.68	.53	.51
12-12	.77	.69	.54	.52

Number	1-19	20-99	100-199	200-999
17/4.8WE	2.12	1.91	1.78	1.42
D 17/8.5XXXP (6/71)				
17L11	.42	.38	.35	.28
18A18	.45	.41	.38	.30

VECTOR Electronic Co., Inc.

12460 Gladstone Ave.,
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

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Number	Selling Prices 1-49	50-199	200-499	500-999
20X	$ 6.75	$ 6.08	$ 4.73	$ 4.52
21X	16.75	15.08	11.73	11.22
22X	11.50	10.35	8.05	7.71
22XA	28.00	25.20	19.60	18.76
25X	21.45	19.31	15.05	14.38
Number	1-19	20-99	100-199	200-999
26L18	$ .73	$ .66	$ .61	$ .49
27X	6.50	5.85	4.55	4.36
27XA	6.50	5.85	4.55	4.36
29P29-062	.79	.71	.66	.53
29X	59.75	53.78	41.83	40.03
30X	10.75	9.68	7.53	7.20
30XA	4.50	4.05	3.15	3.02
31X	17.50	15.75	12.25	11.73
32A3	.31	.28	.26	.21
32A9	.52	.47	.44	.35
32A17	.85	.77	.71	.57
32A17EP	1.29	1.16	1.08	.86
32A18	.86	.77	.72	.58
32A18WE	1.97	1.77	1.65	1.32
32AA7	.56	.50	.47	.38
32AA9	.62	.56	.52	.42
32AA18	.87	.78	.73	.58
32AA18EP	1.64	1.48	1.38	1.10
32G22EP	.99	.89	.83	.66
32G22WE	1.49	1.34	1.25	1.00
	1-49	50-199	200-499	500-999
32X	8.95	8.06	6.27	6.00
32XA	24.95	22.46	17.47	16.71
	1-19	20-99	100-199	200-999
34L19	.78	.70	.66	.52
34LL19	.87	.78	.73	.58
42F22C1	1.04	.94	.87	.70
42F22C2	1.37	1.23	1.15	.92
42G22	.85	.77	.71	.51
42G22EP	1.29	1.16	1.08	.86
42G22WE	1.95	1.76	1.64	1.31
42G22WEC1	2.65	2.39	2.23	1.78
42G22EWC2	2.70	2.43	2.27	1.81
42G24	.87	.78	.73	.58
42G24EP	1.30	1.17	1.09	.87
42G24WE	1.97	1.77	1.65	1.32
42G42	1.30	1.17	1.09	.87
42G42WE	4.13	3.72	3.47	2.77
44P29-062	1.09	.98	.92	.73
45B30	.87	.78	.73	.58
59P19/032	.89	.80	.75	.60
59P44/032	1.61	1.45	1.35	1.09
64A17	1.28	1.15	1.08	.86
64A17EP	2.01	1.81	1.69	1.35
64A18	1.30	1.17	1.09	.87
64A18EP	2.03	1.83	1.71	1.36
64A18WE	3.87	3.48	3.25	2.59
64AA18	1.66	1.49	1.39	1.11
64AA18EP	3.05	2.75	2.56	2.04
64AA32	2.86	2.57	2.40	1.92
64AA32EP	5.39	4.85	4.53	3.61
64AA132	10.45	9.41	8.87	7.00
64P44-016	1.70	1.53	1.43	1.14
64P44-032	1.75	1.58	1.47	1.17
64P44-062	1.79	1.61	1.50	1.20
64P44-062EP	1.69	1.52	1.42	1.13
64P44-062EPC1	2.19	1.97	1.84	1.47
64P44-062EPC2	2.34	2.11	1.97	1.57
64P44-062XXXP	1.49	1.34	1.25	1.00
68L19	1.30	1.17	1.09	.87
68L34	2.03	1.83	1.71	1.36
68LL19	1.66	1.49	1.39	1.11
68LL34	2.90	2.61	2.44	1.94

Number	Selling Prices 1-19	20-99	100-199	200-999
72A32	$ 2.33	$ 2.10	$ 1.96	$ 1.56
76M38/032	.89	.80	.75	.60
84P44/062	2.22	2.00	1.86	1.49
84P44/062EP	2.10	1.89	1.47	1.41
84Q42-062	7.19	6.47	6.04	4.82
84Q42-062C1	10.12	9.11	8.50	6.78
84Q42-062C2	10.85	9.77	9.11	7.27
84Q42-062EP	6.11	5.50	5.13	4.09
85C24	1.30	1.17	1.09	.87
85F24EP	2.28	2.05	1.92	1.53
85F42EP	3.95	3.56	3.32	2.65
85F42WEC1	9.70	8.73	8.15	6.50
85G22	1.52	1.37	1.28	1.02
85G22EP	2.25	2.03	1.89	1.51
85G22WE	3.93	3.54	3.30	2.63
85G24	1.54	1.39	1.29	1.03
85G24EP	2.28	2.05	1.92	1.53
85G24WE	3.96	3.56	3.33	2.56
85G42	2.00	1.80	1.68	1.34
85G42EP	3.95	3.56	3.32	2.65
85G42WE	5.64	5.08	4.74	3.78
85H48WE	2.10	1.89	1.76	1.41
90B30	1.89	1.70	1.59	1.27
95G43	2.41	2.17	2.02	1.61
95G87	4.33	3.90	3.64	2.90
95G175	7.92	7.13	6.65	5.31
120E33WE	4.15	3.74	3.49	2.78
126M76/032	2.29	2.06	1.92	1.53
138P42-062EP	3.26	2.93	2.74	2.18
140L68EP	14.48	13.03	12.16	9.70
140LL68	8.96	8.06	7.53	6.00
166M76/032	2.89	2.60	2.43	1.94
168K38/032	4.89	4.40	4.11	3.28
169P26-062	2.75	2.48	2.31	1.84
169P26-062EP	2.55	2.30	2.14	1.71
169P44-062	4.36	3.92	3.66	2.92
169P44-062C1	5.89	5.30	4.95	3.95
169P44-062C2	6.27	5.64	5.27	4.20
169P44-062EP	3.83	3.45	3.22	2.57
169P44-062EPC1	5.36	4.82	4.50	3.59
169P44-062EPC2	5.75	5.18	4.83	3.85
169P44-062XXXP	3.19	2.87	2.68	2.14
169P47-062EP	3.98	3.58	3.34	2.67
169P59-016	5.69	5.12	4.78	3.81
169P59-032	5.79	5.21	4.86	3.88
169P59-032C1	7.35	6.62	6.17	4.92
169P59-047	5.89	5.30	4.95	3.95
169P59-062XXXP	4.28	3.85	3.60	2.87
169P79-062	7.69	6.92	6.46	5.15
169P84-062	7.99	7.15	6.71	5.35
169P84-062C1	10.98	9.88	9.22	7.36
169P84-062C2	11.70	10.53	9.83	7.84
169P84-062EP	6.79	6.11	5.70	4.55
170H48WE	4.23	3.81	3.55	2.83
170H48WE/032	3.57	3.21	3.00	2.39
175F99WE	28.08	25.27	23.59	18.81
175G22WE	6.14	5.53	5.16	4.11
336M76/007	6.75	6.08	5.67	4.52
336M76/032	5.49	4.94	4.61	3.68
336M76-032C1	6.80	6.12	5.71	4.56
336M76-032C2	7.14	6.43	6.00	4.78
349P84-062	15.99	14.39	13.43	10.71

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O. E. M.

Issue Date JUNE 4 1971

Cancels Sheet Dated APRIL 23 1971

ⓘ Increase Ⓓ Decrease [N] New [D] Discontinued	This reprinting covers: ⓘ, [N] & [D] only.

GENERAL PRICE LIST

12460 Gladstone Ave.
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

VECTOR Electronic Co., Inc.

Number	Selling Prices 1-49	50-199	200-499	500-999
ⓘ 511*	$ .85	$ .77	$ .60	$ .57
512*	.81	.73	.57	.54
513*	.81	.73	.57	.54
514*	.91	.82	.64	.61

Number	1-499	500-999
515	$ .20	$ .15
516	.18	.14
520	.17	.13

Number	1-49	50-199	200-499	500-999
567-1C	$ 1.50	$ 1.35	$ 1.05	$ 1.01
568-1C	1.65	1.49	1.16	1.11
569-1C	1.35	1.22	.95	.90
570-B	2.49	2.24	1.74	1.67
570-F	3.95	3.60	3.20	2.98
570-G	3.95	3.60	3.20	2.98
652	.93	.84	.65	.62
654	1.00	.90	.70	.67

Number	1-19	20-99	100-199	200-999
812*	$ 2.98	$ 2.68	$ 2.50	$ 2.00
812WE*	3.53	3.18	2.97	2.37
837*	2.33	2.10	1.96	1.56
837WE*	2.58	2.32	2.17	1.73
838*	3.89	3.50	3.27	2.61
838-1*	3.89	3.50	3.27	2.61
838A*	2.81	2.53	2.36	1.88
838A-1*	2.81	2.53	2.36	1.88
838AWE*	3.17	2.85	2.66	2.12
838AWE-1*	3.17	2.85	2.66	2.12
838AWE-1GN*	4.70	4.23	3.95	3.15
838PWE*	3.65	3.29	3.07	2.45
838WE*	3.86	3.47	3.24	2.59
838WE-1*	3.86	3.47	3.24	2.59
838WE-1GN*	5.81	5.23	4.88	3.89
842-120*	3.02	2.72	2.54	2.02
842-120WE*	3.33	3.00	2.80	2.23
842-241WE*	4.94	4.45	4.15	3.31
[D] 847* (6/71)				
848PWE*	6.29	5.31	4.96	3.95
848WE*	6.09	5.48	5.12	4.08
856-112WE*	2.08	1.87	1.75	1.39
856-225WE*	3.12	2.81	2.62	2.09
1110-49-S-Pkg. 25	.77	(Any Quantity)		
1111-51-S-Pkg. 25	.99	(Any Quantity)		
1262	1.95	1.76	1.64	1.31
1263	1.75	1.58	1.47	1.17
1264	1.75	1.58	1.47	1.17
1723/1-Bulk	43.50/M	(Any Quantity)		

	100	1000
1723-41	$ 2.69/C	$ 22.33/M
1723B/1-Bulk*	56.25/M	(Any Quantity)
1745-40-Pkg. 25	1.60	(Any Quantity)
1745-40-Pkg. 50	1.60	(Any Quantity)

	1-16	17-416
[N] 1746-125*	2.86	2.73
[N] 1746-126*	3.18	3.05
1746-127*	2.86	2.73

Number	Selling Prices 1-49	50-199	200-499	500-999
[D] 1751/2* (6/71)				
[D] 1751/4* (6/71)				
1752A-33-Pkg. 50	1.49	(Any Quantity)		
[D] 1753A/12-Pkg. 50*				
1930-01/1*	2.43	2.19	1.70	1.63
1930/01/2*	3.07	2.76	2.15	2.06
1930/01/5*	2.80	2.52	1.96	1.88
1930/01/6*	3.08	2.77	2.16	2.06
1930/01/7*	4.43	3.99	3.10	2.97
1930-17/10*	.30	.27	.21	.20
1930-19/4*	.22	.22	.22	...
1930-19/15*	.40	.36	.28	.27
1930-19/17*	.15	.15	.15	...

Number	1-19	20-99	100-199	200-999
2123AWE*	7.94	7.15	6.67	5.32
2323A-20/5	$ 1.07	(Any Quantity)		
2323A-20/6	.83	(Any Quantity)		
2323A-26-1	1.10	(Any Quantity)		
2323A-32-2	.90	(Any Quantity)		
2436*	5.25	4.73	4.41	3.52
[D] 2536WE* (6/71)				

Number	1-49	50-199	200-499	500-999
2592	.87	.78	.61	.58
2593	.72	.65	.50	.48
2594	1.61	1.45	1.13	1.08
[N] 2594A	.93	(Any Quantity)		
[N] 2594D	.66	(Any Quantity)		
2595-Pg. 250	1.00	(Any Quantity)		

Number	1-19	20-99	100-199	200-999
[D] 2815WE* (6/71)				
[D] 3040WE* (6/71)				
[D] 3041WE* (6/71)				
[D] 3047WE* (6/71)				
3070-1XXXP	.87	.78	.73	.58
ⓘ 3082	.68	(Any Quantity)		
3106-1XXXP	.47	.42	.39	.31
[D] 3235* (6/71)				
3474*	10.50	9.45	8.82	7.04
3474-2*	7.95	7.16	6.68	5.33
3473-3*	8.08	7.27	6.79	5.41
3476*	11.40	10.26	9.58	7.64
3476-2*	5.68	5.11	4.77	3.81
3476-3*	8.98	8.08	7.54	6.02
3477*	9.94	8.95	8.35	6.66
[D] 3477-2* (6/71)				
[D] 3477-3* (6/71)				
3477-6*	7.53	6.78	6.33	5.05

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VECTOR Electronic Co., Inc.

12460 Gladstone Ave.,
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

GENERAL PRICE LIST

Issue Date JUNE 4 1971
Cancels Sheet Dated APRIL 23 1971

This reprinting covers: Ⓣ, Ⓓ, Ⓝ & Ⓓ only.

Ⓣ Increase
Ⓓ Decrease
Ⓝ New
Ⓓ Discontinued

Number	Selling Prices 1-19	20-99	100-199	200-999
3477-7*	$9.94	$8.95	$8.35	$6.66
3477-8*	8.94	8.05	7.51	5.95
3662*	6.95	6.26	5.84	4.66
3673*	13.24	11.91	11.11	8.86
3677*	9.89	8.90	8.31	6.63
3677-1*	7.25	6.53	6.09	4.86
3677-2*	8.84	7.96	7.43	5.92
3677-3*	6.48	5.83	5.44	4.34
3682*	9.50	8.55	7.98	6.37
3682-2*	8.49	7.64	7.13	5.69
3682-4*	9.25	8.33	7.77	6.20
3690*	11.30	10.17	9.49	7.57
3719-1*	7.86	7.07	6.60	5.27
3719-2*	8.94	8.05	7.51	5.99
3719-3*	9.94	8.95	8.35	6.66
Ⓓ 3795*	4.35	3.92	3.65	2.91
Ⓓ 3795-1*	5.55	5.00	4.66	3.72
Ⓓ 3795-2*	2.85	2.57	2.39	1.91
Ⓓ 3795-3*	3.45	3.11	2.90	2.31
Ⓝ 3796*	3.65	3.29	3.07	2.45
Ⓝ 3796-1*	2.90	2.61	2.44	1.94
3797*	4.15	3.74	3.49	2.78
Ⓓ 3797-1*	3.30	2.97	2.77	2.21
Ⓓ 3797-2*	5.20	4.68	4.37	3.48
Ⓝ 3819-1*	3.50	3.15	2.94	2.35
Ⓝ 3819-2*	4.99	4.49	4.19	3.34
Ⓝ 3819-3*	2.15	1.94	1.81	1.44
Ⓝ 3819-4*	3.25	2.93	2.73	2.18

A1; A2	3.29ea	(Any Quantity)
A3; A4	5.90ea	(Any Quantity)
A5	5.75	(Any Quantity)
A6	2.89	(Any Quantity)
A7	7.25	(Any Quantity)
A8	6.59	(Any Quantity)
A9	3.29	(Any Quantity)
A10; A12	5.79ea	(Any Quantity)
A13	1.69	(Any Quantity)

Number	100	1000	5000	25000
BI-Pkg. 4	$ .40	(Any Quantity)		
BI-Bulk	3.00	24.00/M	$ 20.10/M	$ 18.00/M

Number	1-49	50-199	200-499	500-999
B-8*	$ 1.56	$ 1.40	$ 1.09	$ 1.05
B-8-T*	2.28	2.05	1.60	1.53
B-10*	1.57	1.41	1.10	1.05
Ⓣ B-10-4*	2.76	2.48	1.93	1.85
Ⓣ B-10-M	2.34	2.11	1.64	1.57
Ⓣ B-10-N*	2.52	2.27	1.76	1.69
Ⓣ B-10-T*	1.95	1.76	1.37	1.31
B-12*	1.71	1.54	1.20	1.15
Ⓣ B-12-T*	2.33	2.10	1.63	1.56
B20F-Pkg. 4	.58	(Any Quantity)		

Number	100-999	1000	5000
B20F-Bulk	$ 4.98/C	$ 44.74/M	$41.58/M
B20G-Pkg. 4	.73	(Any Quantity)	
B20G-Bulk	8.22/C	70.87/M	66.28/M
B21-Pkg. 4	.53	(Any Quantity)	
B21-Bulk	$ 6.04/C	$50.70/M	$ ---
B22-Pkg. 4	.36	(Any Quantity)	
B22-Bulk	3.36/C	28.27/M	25.43/M
B23-Pkg. 4	.53	(Any Quantity)	
B23-Bulk	6.04/C	50.70/M	---
B24-Pkg. 4	.36	(Any Quantity)	
B24-Bulk	6.94/C	58.21/M	---
B24A-Pkg. 4	.36	(Any Quantity)	
B24A-Bulk	6.94/C	58.21/M	---
B25-Pkg. 10	.48	(Any Quantity)	
B25-Bulk	1.32/C	11.40/M	10.26/M
B26-Pkg. 10	.64	(Any Quantity)	
B26-Bulk	5.29/C	44.45/M	---
B27-Pkg. 10	.76	(Any Quantity)	
B27-Bulk	6.61/C	55.67/M	---

*Limited to Authorized Industrial Distributors & O.E.M.

Number	Selling Prices 1-499	500-999
B36-4*	$ .26	$ ...
B37-4*; B38-2*	.26ea.	...
B58-Pkg. 4	1.58	(Any Quantity)
B60-Pkg. 5*	1.50	(Any Quantity)
B61-Pkg. 10*	1.30	(Any Quantity)
B63-240-Pkg. 2	2.42	(Any Quantity)

Number	1-49	50-199	200-499	500-999
B81	$ .53	$ .48	$ .37	$ .36
B83	.60	.54	.42	.40
B91A	.45	.41	.32	.30
B95	.51	.46	.36	.34
B96	.60	.54	.42	.40
Ⓓ B97 (6/71)				
Ⓓ BP.3-3-11* (6/71)				
Ⓓ BP.3-3-18* (6/71)				
BP.3-4-11*	.64	.64	.64	...
BP.3-4-18*	.64	.64	.64	...
Ⓓ BP.3-8-11* (6/71)				
Ⓓ BP.3-8-18* (6/71)				
BP1-3*	.66	.59	.46	.44
BP1-4.6*	.72	.65	.50	.48
BP2-3*	.76	.68	.53	.51
BP2-4.6*	.89	.80	.62	.60
BP3-3*	.86	.77	.60	.58
BP3-4.6*	.92	.83	.64	.62
BP4.5-3*	.97	.87	.68	.65
BP4.5-4.6*	1.12	1.01	.78	.75
Ⓓ BP7-3* (6/71)				
BP7-4*	.55	.50	.39	.37
Ⓓ BP7-8* (6/71)				
Ⓓ BP13-3* (6/71)				
BP13-4*	.58	.52	.41	.39
BP13-8*	1.38	1.24	.97	.92
Ⓓ BP17-3* (6/71)				
BP17-4*	.61	.55	.43	.41
BP17-8*	1.41	1.27	.99	.94
Ⓓ BP27-3* (6/71)				
BP27-4*	.64	.58	.45	.43
BP27-8*	1.53	1.38	1.07	1.03
Ⓓ BP42-3* (6/71)				
BP42-4*	.74	.67	.52	.50
BP42-8*	1.96	1.76	1.37	1.31

Number	100-999	1000	5000	25000
BR1 Pkg. 10	$ .64	(Any Quantity)		
BR1-Bulk	2.21C	14.29M	12.86M	12.01M
BR-2 Pkg. 10	.64	(Any Quantity)		
BR2-Bulk	2.21C	14.29M	12.86M	12.01M
BR3 Pkg. 10	.64	(Any Quantity)		
BR3-Bulk	2.21C	14.29M	12.86M	12.01M
BR4 Pkg. 10	.64	(Any Quantity)		
BR4-Bulk	2.21C	14.29M	12.86M	12.01M
BR5 Pkg. 10	.64	(Any Quantity)		
BR5-Bulk	2.21C	14.29M	12.86M	12.01M
BR5.1 Pkg. 10	.64	(Any Quantity)		
BR5.1-Bulk	2.21C	17.39M	15.65M	14.60M
BR6 Pkg. 10	.64	(Any Quantity)		
BR6-Bulk	2.40C	20.41M	18.37M	17.14M

Number	1-99	100-249	250-999
BR14*	$ .115	$ .105	$ .095
Ⓣ BR16-Pkg. 6	2.25	(Any Quantity)	
Ⓣ BR16-3 Pkg. 6	2.25	(Any Quantity)	

Number	1-249	
BR19-2-1 Pkg. 4*	.33	
BR19-4-1 Pkg. 4*	.35	
BR19-6-1 Pkg. 4*	.37	
BR19-8-1 Pkg. 4*	.40	
BR19-10-1 Pkg. 4*	.45	
BR19-21 Pkg. 24*	1.75	
BR19-240-Pkg. 2*	.67	
BR19H	1.00	(Any Quantity)
BR19M-2 Pkg. 4*	.53	
BR19M-4 Pkg. 4*	.60	
BR19M-6 Pkg. 4*	.65	
BR19M-8 Pkg. 4*	.70	
BR19M-10 Pkg. 4*	.78	
BR20-2-H-Pkg. 12*	2.05	(Any Quantity)

Issue Date JUNE 4 1971

Cancels Sheet Dated APR 23 1971

Ⓘ Increase Ⓓ Decrease Ⓝ New Ⓓ Discontinued	This reprinting covers: Ⓘ, Ⓓ, Ⓝ & Ⓓ.

GENERAL PRICE LIST

12460 Gladstone Ave.,
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

VECTOR Electronic Co., Inc.

Number	Selling Prices 1-49	50-199	200-499	500-999
BR20-4-H-Pkg. 12*	$ 2.15	(Any Quantity)		
BR20-6-H-Pkg. 12*	2.22	(Any Quantity)		
BR20-8-H-Pkg. 12*	2.30	(Any Quantity)		
BR20-10-H-Pkg. 12*	2.42	(Any Quantity)		
BR20-240-Pkg. 2*	1.20	1.08	.84	.80
BR21-10-Pkg. 4*	.37/pkg.	(Any Quantity)		
BR21-16-Pkg. 4*	.40/pkg.	(Any Quantity)		
BR21-20-Pkg. 4*	.43/pkg.	(Any Quantity)		
BR21-30-Pkg. 4*	.50/pkg.	(Any Quantity)		
BR21-45-Pkg. 4*	.60/pkg.	(Any Quantity)		
BR21-240-Pkg. 2*	.86/pkg.	(Any Quantity)		
BR22-240-Pkg. 2*	.99	.89	.69	.66
Ⓓ BR23-7-Pkg. 12* (6/71)				
BR24A-Pkg. 2*	9.86/pkg.	(Any Quantity)		

Number	1-9	10-49	50-199	200-499
Ⓝ BR26-1-Pkg. 2*	$29.90	$26.91	$24.22	$20.03

Number	1-49	50-199	200-499	500-999
Ⓓ BR27-1* to 4*	$ .75	$ .68	$ .53	$ .50
BR30-1-Pkg. 2*	.54/pkg.	(Any Quantity)		
BR31-1-Pkg. 2*	.62/pkg.	(Any Quantity)		
BR33-Pkg. 8*	3.59	(Any Quantity)		
BR34-16-Pkg. 4*	5.00	(Any Quantity)		
BR34-20-Pkg. 4*	4.95	(Any Quantity)		
BR50-Pkg. 50	.89	(Any Quantity)		
BR55-Pkg. 25	1.99	(Any Quantity)		
BR56-Pkg. 2	.53	.48	.37	.36
BU-1-Pkg. 6	1.27	(Any Quantity)		
C-8*	1.55	1.40	1.09	1.04
C-8-K1.02*	1.20	1.08	.84	.80
C-8-TK1.02*	1.76	1.58	1.23	1.18
C-10*	1.50	1.35	1.05	1.01
Ⓓ C-10-10* (4/71)				
C-10-K1.02*	1.15	1.04	.81	.77
C-10-M*	2.43	2.19	1.71	1.63
C-10-N*	2.46	2.22	1.73	1.65
C-10-NN*	3.39	3.05	2.38	2.27
Ⓘ C-10-T*	2.09	1.88	1.46	1.40
C-12*				
Ⓓ C-12-4* (6/71)	3.14	2.83	2.20	2.10
C-12-K*	1.44	1.30	1.01	.97
C-12-K1.02*	1.10	.99	.77	.74
C-12-M*	2.46	2.22	1.73	1.65
C-12-N*	2.50	2.25	1.75	1.67
C-12-NN*	3.42	3.08	2.40	2.29
Ⓘ C-12-T*	2.16	1.94	1.51	1.45
C-12-TK1.02*	1.87	1.68	1.31	1.25
C-16-B1*	.11	.11	.11	.09
CA-34-HE-89*	18.50	-	-	-
CA-34-HE-119*	19.50	-	-	-
CA-34-HP-89*	22.50	-	-	-
CA-34-HP-119*	23.50	-	-	-
Ⓓ CA-52-HE-89*	19.90	-	-	-
CA-52-HE-119*	21.00	-	-	-
CA-52-HE-156*	22.50	-	-	-
CA-52-HP-89*	23.90	-	-	-
CA-52-HP-119*	26.00	-	-	-
CA-52-HP-156*	27.50	-	-	-
CA-87-HE-89*	23.00	-	-	-
CA-87-HE-119*	24.00	-	-	-
CA-87-HE-156*	26.50	-	-	-
CA-87-HP-89*	28.00	-	-	-
CA-87-HP-119*	29.00	-	-	-
CA-87-HP-156*	32.00	-	-	-

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O.E.M. /$5.00 Set-Up Charge

Number	Selling Prices 1-9	10-49	50-199	200-499	500-999
Ⓘ CCK-3*	$24.95	$22.46	$19.96	$ -	$ -
Ⓘ CCK-13*	32.50	29.25	27.75	-	-
CM-45-65*	2.95	2.95	2.24	1.74	1.67
CMA-3-16*	53.54	48.06	42.72	37.38	35.78
CMA-3-20*	49.24	44.31	39.88	34.47	32.99
Ⓝ CMA-4-20*	49.95	44.96	39.96	34.97	33.47
CMG-1	22.49	20.24	17.99	15.74	15.07
CMG-2*	22.99	20.69	18.39	16.09	15.40
CMG-3*	23.99	21.56	19.19	16.79	16.07
CMG-4*	18.33	16.50	14.66	12.83	12.28
CMG-5*	18.90	17.01	15.12	13.23	12.66
CMG-6*	19.90	17.91	15.92	13.93	13.33
CMG-7*	15.82	14.24	12.66	11.07	10.60
CMG-8*	15.82	14.24	12.66	11.07	10.60
CMG-9*	16.82	15.14	13.46	11.77	11.27
CMG-10*	9.48	8.53	7.58	6.64	6.35
CMG-11*	9.98	8.98	7.97	6.99	6.69
CMG-12*	10.98	9.88	8.78	7.69	7.36
CMG-13*	6.78	6.10	5.42	4.75	4.54
CMG-14*	7.28	6.55	5.82	5.10	4.87
CMG-15*	8.27	7.45	6.62	5.80	5.55
CS-0608-1 Pkg. 12*	.99	(Any Quantity)			

Number	1-4	5-9	10-19	20-39	40-199
Ⓝ CU45/27-1R	$2.65	$2.39	$2.33	$2.23	$1.76
Ⓝ CU65/45-1R	5.20	4.68	4.58	4.37	3.48
Ⓝ CU65/45-2R	7.45	6.71	6.56	6.26	4.99
Ⓝ CU70P45-2R	10.20	9.18	8.98	8.57	6.83
Ⓝ CU90/80-1R	11.75	10.58	10.34	9.87	7.87

Number	1-19	20-99	100-199	200-999
Ⓓ CU45/30-1 (6/71)				
Ⓓ CU45/30-2 (6/71)				
CU45/30WE-1	.72	.65	.60	.48
CU65/45-1	.62	.56	.52	.42
Ⓓ CU65/45-2 (6/71)				
CU65/45WE-1	1.39	1.25	1.17	.93
CU65/45WE-2	1.58	1.42	1.33	1.06
Ⓓ CU85/45-1 (6/71)				
Ⓓ CU85/45-2 (6/71)				
CU85/45WE-1	1.78	1.60	1.50	1.19
CU85/45WE-2	2.03	1.83	1.71	1.36

Number	Each
Ⓘ D1	$ 5.24
Ⓘ D2	5.24
Ⓘ D3	13.35
Ⓘ D4	16.60
Ⓘ D5	5.24
Ⓘ D6	11.83
Ⓓ D7 (6/71)	

Number	1-49	50-199	200-499	500-999
EFP104-6.6*	$5.76	$5.18	$4.03	$3.86
EFP104-9.7*/	6.68	6.01	4.68	4.48
EFP164-6.6*	5.90	5.31	4.13	3.95
EFP164-9.7*	6.80	6.12	4.76	4.56
EFP168-9.7*/	10.18	9.16	7.13	6.82
EFP204-6.6*	6.07	5.46	4.25	4.07
EFP204-9.7*	6.96	6.26	4.87	4.66
EFP208-9.7*	10.40	9.36	7.28	6.97
EFP304-6.6*	6.78	6.10	4.75	4.55
EFP304-9.7*	7.66	6.89	5.36	5.13
EFP308-9.7*/	11.24	10.12	7.87	7.53

VECTOR Electronic Co., Inc.

12460 Gladstone Ave.,
Sylmar, Calif. 91342

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GENERAL PRICE LIST

Issue Date JUNE 4 1971

Cancels Sheet Dated APR 23 1971

This reprinting covers Ⓣ, Ⓓ, Ⓝ & Ⓓ.

Ⓣ Increase
Ⓓ Decrease
Ⓝ New
Ⓓ Discontinued

Number	Selling Prices 1-49	50-199	200-499	500-999
EFP454-6.6*	$ 7.70	$ 6.93	$ 5.39	$ 5.16
EFP454-9.7*	8.81	7.93	6.17	5.90
EFP458-9.7*/	13.03	11.73	9.12	8.73
Ⓓ FA1-Pk. -24* (6/71)				
FA2-Pkg. 20	.60	(Any Quantity)		
FA3-Pkg. 10	.49	(Any Quantity)		
Ⓓ FP1-35* (6/71)				
FP1-52*	.96	.86	.67	.65
Ⓓ FP1-87* (6/71)				
Ⓓ FP1.6-35* (6/71)				
FP1.6-52*	1.06	.95	.74	.71
FP1.6-87*	1.86	1.67	1.30	1.25
Ⓓ FP2-35* (6/71)				
FP2-52*	1.12	1.01	.78	.74
FP2-87*	1.89	1.70	1.32	1.27
Ⓓ FP3-35* (6/71)				
FP3-52*	1.38	1.25	.97	.92
FP3-87*	1.96	1.76	1.37	1.31
FP34-2Pkg. 2*	1.25	1.13	.88	.84
FP34-19*	.95	.86	.67	.64
Ⓓ FP45-35* (6/71)				
FP45-52*	1.64	1.48	1.15	1.10
FP45-87*	2.43	2.19	1.70	1.63
FP52-2-Pkg. 2*	1.50	1.35	1.05	1.01
FP52-19*	1.14	1.03	.80	.76
FP87-2-Pkg. 2*	1.70	1.53	1.19	1.14
FP87-19*	1.29	1.16	.90	.86
FPA-14-Pkg. 4	2.10	1.89	1.47	1.41
FPA-14-1	3.36	3.02	2.35	2.25

Number	1-19	20-99	100-199	200-999
Ⓓ FPA14-2*	$ 6.25	$ 5.63	$ 5.25	$ 4.19

Number	1-49	50-199	200-499	500-999
FT1-Pkg. 8*	$ .86	(Any Quantity)		
FT2-Pkg. 8	.86	(Any Quantity)		
FT3-Pkg. *	.40	(Any Quantity)		
G2-10*	1.16	$ 1.05	$ .81	$ .77
G2-10-4*	2.46	2.21	1.72	1.65
G2-10-10*	3.50	3.15	2.45	2.35
Ⓣ G2-10-T*	2.21	1.99	1.55	1.48
Ⓣ G2-10-T-1*	2.21	1.99	1.55	1.48
G2.1-8*	1.45	1.31	1.01	.97
G2-1-8-4*;8-4.6*	2.30ea	2.07ea	1.61ea	1.54ea
G2-1-8F*	1.49	1.34	1.05	.99
G2.1-10-10*	2.30	2.07	1.61	1.54
Ⓓ G2.1-10-11*(4/71)				
G2.2-8*	1.40	1.25	.98	.94
G2.2-8-4*	2.28	2.05	1.60	1.53
G2.2-8F*	1.49	1.34	1.05	.99
G2.2-10-10*	2.15	1.94	1.51	1.44
G210-10*	3.50	3.15	2.45	2.35
HA4;HA5-Pkg. 2*	1.00/pkg.	(Any Quantity)		
Ⓓ HA6-Pkg. 2*(6/71)				
Ⓓ HA7-Pkg. 2*(6/71)				
Ⓓ HA8-Pkg. 5*(6/71)				
HA9-Pkg. 4*	2.59/pkg.	(Any Quantity)		
HA11-Pkg. 4*	1.69/pkg.	(Any Quantity)		
Ⓝ HA12*;13*-Pkg. 2	2.49/pkg.	(Any Quantity)		
HC2-Pkg. 12	2.03/pkg.	(Any Quantity)		
HD2.1-Pkg. 50	.85/pkg.	(Any Quantity		
HD6	7.70	(Any Quantity)		
Ⓓ HD8* (6/71)				
HD10	14.98	(Any Quantity)		
HD11-1-1*	4.37	(Any Quantity)		
HD11-1-2*	4.08	(Any Quantity)		
Ⓔ HF16-28-46-30*				
Ⓔ HF16-46-66-30*				

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS & O.E.M.

/$5.00 Set-Up Charge.

Number	Selling Prices 1-49	50-199	200-499	500-999
Ⓓ HF20-28-46-30*				
HF20-31-42/1*	3.89	3.50	2.72	2.61
HF20-31-42/3*	4.18	3.76	2.93	2.80
HF20-31-86/1*	5.72	5.15	4.00	3.83
HF20-46-62/1*	4.58	4.12	3.21	3.07
HF20-46-62/2*	4.87	4.38	3.41	3.26
HF20-46-66-30*				
HF30-46-66-30*				
HF45-46-66-30*				
HFE-16-28*				
HFE-16-46*				
Ⓒ HFE-20-28*(6/71)				
HFE-20-46*				
HFE-30-46*				
HFE-45-46*				
HFP-46*				
HFP-66*				
HP-34-1*	12.00ea	(Any Quantity)		
HP-52-1*	12.50	-	-	-
HP87-1*	19.75	-	-	-
K*	.46	.41	.32	.31
K1*	.44	.40	.31	.29
K1.04*	.48	.43	.34	.32
K1.1*	.40	.40	.40	.28
K1.14*	1.25	1.13	.88	.84
K1.302*;-313*	.47ea	.42ea	.33ea	.31ea
K1.321*	.51	.46	.36	.34
K1.334*	.53	.48	.37	.36
K1.402*; K1.413*	.56ea	.50ea	.39ea	.38ea
K1.421	.56	.50	.39	.38
K1.434*	.60	.54	.42	.40
K2.02-1-Pkg.25*	3.75/pkg.	(Any Quantity)		
K2.06-Pkg. 25*	3.04/pkg.	(Any Quantity)		
K2.09-Pkg. 25*	3.08/pkg.	(Any Quantity)		
K2.15-Pkg. 25*	3.53/pkg.	(Any Quantity)		
Ⓓ K6.06-Pkg. 25				
K6.09-Pkg. 25	3.00/pkg.	(Any Quantity)		
K6.15-Pkg. 25	3.00/pkg.	(Any Quantity)		
K7-Pkg. 25	2.52/pkg.	(Any Quantity)		
K7 -Bulk	8.25/C(100-900)	60.50/M(1M)		

Number	1-999	1M 4999
K9.06*;	$ .92	$ .84
K9.09*:K9.15*	.93	.84

Number	1000	5000
K23A-Pkg. 50*	2.01 (Any Quantity)	
K23A-Bulk*	32.03/M	
Ⓓ K23C-Pkg. 50*		
Ⓓ K23C-Bulk*(6/71)		
K24A-Pkg. 50*	1.44 (Any Quantity)	
K24A Bulk	20.59/M	18.53/M
K24C-Pkg. 50*	.86 (Any Quantity)	
K24C-Bulk	11.21/M	10.09/M
K25-Pkg. 50*	2.01 (Any Quantity)	
K25-Bulk*	32.03/M	
K25C Pkg. 50*	1.83 (Any Quantity)	
K25C-Bulk*	29.12/M	
K26A Pkg. 50	.92 (Any Quantity)	
K26A-Bulk	13.16/M	11.85/M
K26C-Pkg. 50	.69 (Any Quantity)	
K26C-Bulk	8.58/M	7.73/M
K27A Pkg. 50	.86 (Any Quantity)	
K27A Bulk	11.16/M	10.02/M
K27C-Pkg. 50	.39 (Any Quantity)	
K27C-Bulk	8.20/M	7.38/M
K28-Pkg. 50*	2.01 (Any Quantity)	
K28-Bulk*	32.03/M	
K28-1A-Pkg. 50*	2.01 (Any Quantity)	
K28-1A-Bulk*	32.03/M	

Number	1-4	5-9
K30A-Pkg. 50	1.49	(Any Quantity)
K30A-Pkg. 1000	26.78	24.10
K30C-Pkg. 50	.99	(Any Quantity)
K30C-Pkg. 1000	14.50	13.00
K31A-Pkg. 50	.99	(Any Quantity)
K31A-Pkg. 1000	14.50	13.05
K31C-Pkg.50	.79	(Any Quantity)
K31C-Pkg. 1000	9.50	8.55

Issue Date JUNE 4 1971

Cancels Sheet Dated APRIL 23 1971

ⓘ Increase Ⓓ Decrease [N] New [D] Discontinued	This reprinting covers: ⓘ, [N] & [D] only.

GENERAL PRICE LIST

12460 Gladstone Ave.,
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

VECTOR Electronic Co., Inc.

Number	1-19	20-99	100-199	200-999
K32-Pkg. 100	$ 1.49	$ 1.34	$ 1.25	$ 1.00
Number	1-4	5-24	25-49	
K32-Pkg. 1000	$11.50	$10.35	$ 9.32	
K35*	.08	(Any Quantity)		
Number	1-4	5-9		
K36A-Pkg. 50	$ 1.25	(Any Quantity)		
K36A-Pkg. 1000	17.98		16.18	
K36C-Pkg. 50	.95	(Any Quantity)		
K36C-Pkg. 1000	14.50		13.05	
K37A-Pkg. 50	.95	(Any Quantity)		
K37A-Pkg. 1000	12.95		11.66	
K37C-Pkg. 50	.80	(Any Quantity)		
K37C-Pkg. 1000	9.10		8.19	
K38A-Pkg. 50	1.49	(Any Quantity)		
K38A-Pkg. 1000	25.50		22.95	
[D] K38A-Bulk				
K38C-Pkg. 50	.99	(Any Quantity)		
K38C-Pkg. 1000	16.15		14.55	
K39A-Pkg. 50	1.45	(Any Quantity)		
K39A-Pkg. 1000	21.70		19.53	
K39C-Pkg. 50	.86	(Any Quantity)		
K39C-Pkg. 1000	11.97		10.77	
Number	1-49	50-199	200-499	500-999
K510	$ .25	$ .23	$ .18	$ .17
K2001-2-Pkg.100*	2.40	(Any Quantity)		
K2001-2-Bulk*(1-4)		19.15/M		
KF1.335*	1.00	.90	.70	.67
KF1.435*	1.12	1.01	.78	.75
KG2001-2-Bulk*	30.00/M	(Any Quantity)		
KG3.02-Pkg.25	5.20	(Any Quantity)		
KG3.06-Pkg.25	5.20	(Any Quantity)		
KG3.09-Pkg.25	5.25	(Any Quantity)		
KG3.15-Pkg.25	5.35	(Any Quantity)		
Number				
KG4.09-Pkg.25	15.65		10.45	
KG4.15-Pkg.25	16.19		10.79	
KG4.24-Pkg.25	16.80	1	11.20	40
KG5.09-Pkg.25	18.75	to	12.50	&
KG5.15-Pkg.25	19.88	39	13.25	Up
KG5.24-Pkg.25	20.40		13.60	
KR1.334*	.62	.56	.43	.42
KR1.434*	.84	.76	.59	.56
L9.5*	.14	.14	.14	.11
L9.6*	.13	.13	.13	.10
L9.7*	.17	.17	.17	.13
L18*	.18	.18	.18	-
[D] L2711-2* (6/71)				
[D] L2711-8* (6/71)				
L2711-15 to 17*		.59ea	(Any Quantity)	
LA1-PX-1(Pkg. 12);-2		3.20ea	(Any Quantity)	
LA1-PY-;(Pkg. 12);-2		2.40ea	(Any Quantity)	
LA2P1;P2 (Pkg.12)*		2.40ea	(Any Quantity)	
LA3P1;P2 (Pkg. 12)		2.40ea	(Any Quantity)	
M54*	.65	.59	.46	.44
M62*	.26	.26	.26	...
M63*	.28	.25	.20	.19
M64*	.49	.44	.34	.33
M1010-1*	.13	.13	.13	.10
M1100-5*;-7*	.30ea	.30ea	.30ea	.21ea
M1100-9*	.49	.44	.34	.33
M1106-5*	.31	.28	.22	.21
M1106-7*	.41	.37	.29	.28
M1106-9*	.49	.44	.34	.33
M1106-11*	.65	.59	.46	.44
M1136*	.35	.32	.25	.23
[D] M5166 (6/71)				
[N] M5430-3-1 (Pkg. 5)		4.56	(Any Quantity)	
[N] M5430-3-2 (Pkg. 5)		5.01	(Any Quantity)	
[N] M5430-4-1		.76	(Any Quantity)	
[N] M5430-4-2		1.35	(Any Quantity)	
MC-2287-7*	.08	.08	.08	...
MC-2414-2*	.19	.19	.19	...
MC-3061-7*	.07	.07	.07	...
MP-1-Pkg. 10*	1.49/pkg	(Any Quantity)		

* LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O. E. M.

	Selling Prices 1-49	50-199	200-499	500-999
MP-1-Pkg. 100*	$12.00/pkg.	(Any Quantity)		
MP-2-Pkg. 10*	1.71/pkg.	(Any Quantity)		
MP-2-Pkg. 100*	13.60/pkg.	(Any Quantity)		
MS-167*	1.15	(Any Quantity)		
NT2-1;4-1-Pkg. 25	.39/ea	(Any Quantity)		
[D] NT4-2-Pkg. 75*				
ⓘ NT4-3;-4 Pkg. 4*	3.54ea	3.19ea	2.48ea	2.37ea
[D] NT4-6-Bulk* (6/71)				
[D] NT4-6 Pkg. 12* (6/71)				
[N] NT4-7-Pkg. 25	1.19	(Any Quantity)		
[N] NT4-9-Pkg. 4	3.54	3.19	2.48	2.37
NT6-1-Pkg. 12*	3.54	(Any Quantity)		
[D] NT6-2-Pkg. 24*				
Number	1-19	20-99	100-999	200-999
P1	$ .52	$ .47	$ .44	$ .35
P2	1.09	.98	.92	.73
Number	1-49	50-199	200-499	500-999
P7*;P7A*	$ .47ea	$ .42ea	$ .33ea	$ .31ea
Number	1-19	20-99	100-199	200-999
P7C*	$ 1.24	$ 1.12	$ 1.05	$ .84
P7D*	1.74	1.56	1.46	1.17
Number	1-49	50-199	200-499	500-999
P8L*	$ 1.29	$ 1.16	$ .90	$ .86
P9*;P9A*	.56ea	.50ea	.39ea	.38ea
Number	1-19	20-99	100-199	200-999
P9C*	$ 1.39	$ 1.24	$ 1.17	$ .92
P9D*	1.84	1.65	1.54	1.23
P13*	1.15	(Any Quantity)		
Number	1-49	50-199	200-499	500-999
P91	$ .59	$ .53	$ .41	$ .40
P91A	1.50	(Any Quantity)		
P92A	.50	.45	.35	.34
P93A*	24.50	(Any Quantity)		
P95*	4.95	(Any Quantity)		
P95A*	5.00	(Any Quantity)		
P95B*	3.40	(Any Quantity)		
P96C	8.49	(Any Quantity)		
P96C-1	2.59	(Any Quantity)		
P96C-2	1.09	(Any Quantity)		
P96C-3	7.50	(Any Quantity)		
[D] P97 (6/71)				

Number	Sugg'd. Resale Price
P108*	$26.00
P115*	85.00
P116	1.85
P116A	1.98
P116B	2.45
P116C	2.58
P122B	1.40
P126	4.75
P127*	13.50
P128*	6.10
P129*	7.85
P131A thru P134A	1.75ea
[D] P135 (6/71)	
P136	1.49
P138A	2.58
P138C	1.98
P138D	2.58
P138E	1.98
P139	1.50
P140*	9.85
P141A	6.45
P141B	29.85
P141C	26.45
P141D	2.25
P145-Pkg. 25	.75
[D] P147 (6/71)	
P149	1.49
P149A	1.89
P150*	.99
[D] P151* (6/71)	
[D] P152-Pkg. 4* (6/71)	
P154	2.79

VECTOR Electronic Co., Inc

GENERAL PRICE LIST

12460 Gladstone Ave.
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

Issue Date JUNE 4 1971

Cancels Sheet Dated APRIL 23 1971

This reprinting covers: Ⓣ, Ⓓ, Ⓝ & Ⓟ.

Ⓣ Increase
Ⓓ Decrease
Ⓝ New
Ⓟ Discontinued

Number	Selling Prices 1-49	50-199	200-499	500-999
Ⓣ PB110-2*	4.25	3.83	2.98	2.85
Ⓣ PB210-2*	4.45	4.01	3.12	2.98
PB510-2*	6.45	5.81	4.52	4.32
Ⓣ PB1010*	10.99	9.87	7.68	7.35
Ⓣ PB1010-1*	11.07	9.96	7.75	7.42
PB1010-2*	10.85	9.77	7.60	7.27
Ⓓ PB1010-A* (6/71)				
PB1020-2*	21.60	19.44	15.05	14.47
PB1520-2*	32.35	29.12	22.65	21.67
PK1D*	.69	.62	.48	.46
Ⓓ PL3/4.5 (6/71)				
Ⓓ PL4.5/6.5 (6/71)				
PL48-48-Pkg. 2	2.13	1.92	1.49	1.43
PL48-85-Pkg. 2	2.74	2.47	1.92	1.84
PL48-170-Pkg. 2	4.14	3.73	2.90	2.77
PL85-85-Pkg. 2	3.84	3.46	2.69	2.57
PL85-170-Pkg. 2	6.29	5.66	4.40	4.21
PL170-170-Pkg. 2	12.77	11.49	8.94	8.56
Ⓓ PL2746* (6/71)				
Ⓓ PL2766* (6/71)				
Ⓓ PL2794* (6/71)				
PL3045*	.75	.68	.53	.50
Ⓓ PL4546 (6/71)				
PL4565*	1.00	.80	.70	.67
PL4566*	69	.67	.48	.46
PL4597*	1.22	1.10	.85	.82
Ⓓ PL8040 (6/71)				
Ⓓ PL8066 (6/71)				
PL8097*	1.71	1.54		1.15
Ⓓ PL27140* (6/71)				
Ⓓ PL45140* (6/71)				
Ⓓ PL80140* (6/71)				
PLG-30-45-Pkg. 2*	3.63	3.27	2.54	2.43
PLG-45-65-Pkg. 2*	4.90	4.41	3.43	3.28
Ⓓ PLS-30-45-Pkg. 2*				
Ⓓ PLS-45-65-Pkg. 2*				
R7	.11	.11	.11	-
R7B21J	.47	.42	.33	.31
R7BR2J	.44	.40	.31	.29
R7J	.35	.35	.35	-
R8	.16	.16	.16	-
R8B21J	1.00	.90	.70	.67
R8BR3J	1.24	1.12	.87	.83
R8J	.55	(Any Quantity)		
R8.5	.42	.38	.29	.28
R9	.13	.13	.13	.30
R9BR2J	.50	.45	.35	.34
R9J	.23	.23	.23	-
R11	.41	.37	.29	.27
R14J*	1.03	.93	.72	.69
R23A*	77.70/M	(1M-9,999)		
R23A-Pkg. 50*	4.89	(Any Quantity)		
R24A*	77.70/M	(1M-9,999)		
R24A-Pkg. 50*	4.89	(Any Quantity)		
R71; R72	.17ea	.17ea	.17ea	-
R72B21J	.47	.42	.33	.31
R72BR2J	.44	.40	.31	.29
R91	.17	.17	.17	-
R92	.14	.14	.14	.11
R92B21J	.53	.48	.37	.36
R92BR2J	.50	.45	.35	.34
R104-P*; R104-S*	1.06ea	.95ea	.75ea	.71ea
R108-P*; R108-S*	1.17ea	1.05ea	.82ea	.78ea
R112-P*; R112-S*	1.50ea	1.35ea	1.05ea	1.01ea
R116-P*; R116-S*	1.84ea	1.66ea	1.29ea	1.23ea
R120-P*; R120-S*	1.70ea	1.53ea	1.19ea	1.14ea
R173-A-Pad 50	1.45	(Any Quantity)		
R173-A-1-Pad 50	2.50	(Any Quantity)		
R173-F-Pad 50	2.00	(Any Quantity)		
R173-G-Pad 50	2.00	(Any Quantity)		
Ⓓ R173-H-Pad 50	2.00	(Any Quantity)		

Number	Selling Prices 1-49	50-199	200-499	500-999
R209-P*	$ 1.26	$ 1.13	$ .88	$ .84
R209-S*	1.26	1.13	.88	.84
R217-P*	1.62	1.46	1.13	1.09
R217-S*	1.62	1.46	1.13	1.09
R225-P*	1.86	1.67	1.30	1.25
R225-S*	1.86	1.67	1.30	1.25
R233-P*	2.50	2.25	1.75	1.68
R233-S*	2.50	2.25	1.75	1.68
R241-P*	2.70	2.43	1.89	1.81
R241-S*	2.70	2.43	1.89	1.81

	1-19	20-99	100-199	200-999
R322	$2.12	$ 1.91	$ 1.78	$ 1.42

Number	Sugg'd. Resale Price
R393A-1	$ 2.00
R393A-2	2.00
R405	2.00
R405-1-Pkg. 3	1.95
R405-2-Pkg. 3	1.95
R405-3-Pkg. 3	1.95
R405-4-Pkg. 3	1.95
R406	2.00
R406-1-thru 4-Pkg. 3	1.95

Number	1-99	100-249	250-999
R612-1*	$ 2.08	$ 1.62	$ 1.39
R616-1*	2.60	2.01	1.75

Number	1-24	25-49	50-99	100-249	250-499	500-999
Ⓝ R630*	$ 2.22	$ 1.77	$ 1.48	$ 1.18	$ 1.12	$ 1.12
R635*	5.35	5.35	5.35	3.57	2.98	2.98
R636*	4.70	4.70	....	....	....	.....
R644*	2.97	2.48	1.98	1.58	1.50	1.43
R644-1	3.96	3.17	2.64	2.11	2.00	.....

Number	1-9	10-49	50-99	100-249	250 & Up
Ⓝ R644-2*	$ 2.57	$ 2.34	$ 2.11	$ 1.84	$ 1.66

R714-Pkg. 5*	4.90/pkg.	(Any Quantity)
R714-1-Pkg. 5*	3.20/pkg.	(Any Quantity)
R716-Pkg. 5*	5.90/pkg.	(Any Quantity)
R716-1-Pkg. 5*	3.85/pkg.	(Any Quantity)

Number	1-49	50-199	200-499	500-999
RA2	$ .09	$ .09	$ .09	$ .07
Ⓓ RA2.4 (6/71)				

Number	1-24	25-49	50-99	100-249
RA3.4	.21	.168	.14	.112.

Number	1-49	50-199	200-499	500-999
RA4	.36	.32	.25	.24
RA4.5	.26 (1-499)			.20 (500-1499)
RA4.51	67	.60	.47	.45
RA9	.46 (1-499)			.32 (500-999)
RA9.1	.55	.50	.39	37
Ⓣ RA10	.77	(Any Quantity)		
Ⓓ RA10-1	1.04	.94	.73	.70
Ⓣ RA88	.71	(Any Quantity)		
Ⓓ RA88-1	.98	.88	.69	.66
RW120-P*; -S*	1.81ea	1.63ea	1.27ea	1.21ea
RW241-P*; -S*	2.80ea	2.52ea	1.96ea	1.88ea

Number	1000	5000
S4 .250-Pkg. 50	.66	(Any Quantity)
S4/.250-Bulk	8.20/M	8.00/M
S4Z/.250-Pkg. 50	.60	(Any Quantity)
S4Z/.250-Bulk	7.25/M	6.52/M

Number	1-49	50-199	200-499	500-999
S7	$ .10	$ .10	$ .10	$ ...
S7.17	.07	.07	.07	...
S7.22	.18	.18	.18	.14
S9	.05	.05	.05	...
S9.17	.05	.05	.05	...
S9.22	.19	.19	.19	...

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O. E. M.

Issue Date JUNE 4 1971

Cancels Sheet Dated APRIL 23 1971

ⓘ Increase ⓓ Decrease Ⓝ New Ⓓ Discontinued	This reprinting covers: Ⓓ only.

GENERAL PRICE LIST

12460 Gladstone Ave.
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VECTOR Electronic Co., Inc.

Number	Selling Prices 1-49	50-199	200-499	500-999
SC2-1-Pkg. 25	$ .39	(Any Quantity)		
Ⓓ SC2-2-Pkg. 25 (6/71)				
SC4-1-Pkg. 50	.55	(Any Quantity)		
SC4-2-Pkg. 50	.85	(Any Quantity)		
SC4-3-Pkg. 25	.39	(Any Quantity)		
SC4-5-Pkg. 50*	.49	(Any Quantity)		
Ⓓ SC4-6-Pkg. 50* (6/71)				
Ⓓ SC4-9-Pkg. 24* (6/71)				
SC4-9-Pkg. 24*	.53	(Any Quantity)		
SC4-11-Pkg. 50*	.51	(Any Quantity)		
SC4-16-Pkg. 50*	.96	(Any Quantity)		
SC6-1-Pkg. 25	1.25	(Any Quantity)		
SC6-1A-Pkg. 25	1.25	(Any Quantity)		
SC6-2-Pkg. 26*	.40	(Any Quantity)		
SC6-6-Pkg. 25	.95	(Any Quantity)		
SC10-2-Pkg. 12*	1.35	(Any Quantity)		
SP-09-1-Pkg. 12*	2.92	(Any Quantity)		
SR0.3-30/45-Pkg. 5*	1.90	1.71	1.33	1.27
SR0.3-45/65-Pkg. 5*	2.25	2.03	1.58	1.51
SR03-240-062-Pkg. 2*	1.32	1.19	.92	.89
SR037-240-Pkg. 2*	3.29	2.96	2.30	2.20
SR037A-240-Pkg 2*	2.89	2.60	2.02	1.94
SR1-4.6/062A-Pkg. 2*	.95	.86	.67	.64
SR1-6.6/062A-Pkg. 2*	1.06	.95	.74	.71
SR1-9.7/062A-Pkg. 2*	1.51	1.36	1.06	1.01
SR1-14/062A-Pkg. 2*	1.80	1.62	1.26	1.21
SR1-29-062-Pkg. 2	1.05	.95	.74	.70
SR1-31-062-Pkg. 2	1.07	.96	.75	.72
SR1-46-062-Pkg. 2	1.18	1.06	.83	.79
SR1-48/062-Pkg. 2	1.05	.95	.74	.70
SR1-49-062-Pkg. 2	1.19	1.07	.83	.80
SR1-66-062-Pkg. 2	1.40	1.26	.98	.94
Number	1-49	50-199	200-499	500-999
SR1-80-062-Pkg. 2	$1.51	$1.36	$ 1.06	$ 1.01
SR1-86-062-Pkg. 2	1.53	1.38	1.07	1.03
SR1-100-062-Pkg. 2	1.71	1.54	1.20	1.15
SR1-140-062-Pkg. 2	2.12	1.91	1.48	1.42
SR1-171-062-Pkg. 2	2.44	2.20	1.71	1.63
SR1-240-062-Pkg. 2	2.93	2.64	2.05	1.96
SR1.6-4.6/062A-Pkg. 2	.99	.89	.69	.66
SR1.6-6.6/062A-Pkg. 2	1.13	1.02	.79	.76
SR1.6-9.7/062A-Pkg. 2	1.59	1.43	1.11	1.07
SR1.6-14/062A-Pkg. 2*	1.88	1.69	1.32	1.26
SR1-650-062-Pkg. 4	9.40§	8.46§§	6.58#	6.30##
SR2-4.6/062A-Pkg. 2	1.11	1.00	.78	.74
SR2-6.6/062A-Pkg. 2*	1.29	1.16	.90	.55
SR2-9.7/062A-Pkg. 2*	1.67	1.50	1.17	1.12
SR2-14/062A-Pkg. 2*	2.23	2.01	1.56	1.49
SR2-29-062-Pkg. 2	1.21	1.09	.85	.81
SR2-30-093-Pkg. 2	1.23	1.11	.86	.82
SR2-31-062-Pkg. 2	1.23	1.11	.86	.82
SR2-46-062-Pkg. 2	1.44	1.30	1.01	.96
SR2-46-093-Pkg. 2	1.44	1.30	1.01	.96
SR2-48-093-Pkg. 2	1.46	1.31	1.02	.98
SR2-49-062-Pkg. 2	1.46	1.31	1.02	.98
SR2-66-062-Pkg. 2	1.72	1.55	1.20	1.15
SR2-66-093-Pkg. 2	1.72	1.55	1.20	1.15
SR2-80-062-Pkg. 2	1.86	1.67	1.30	1.25
SR2-80-093-Pkg. 2	1.86	1.67	1.30	1.25
SR2-85-093-Pkg. 2	1.92	1.73	1.34	1.29
SR2-86-062-Pkg. 2	$1.92	$1.73	$1.34	$ 1.29
SR2-100-062-Pkg. 2	2.21	1.99	1.55	1.48
SR2-100-093-Pkg. 2	2.21	1.99	1.55	1.48
SR2-140-062-Pkg. 2	2.79	2.51	1.95	1.87
SR2-140-093-Pkg. 2	2.79	2.51	1.95	1.87
SR2-170-093-Pkg. 2	3.20	2.88	2.24	2.14
SR2-171-062-Pkg. 2	3.20	2.88	2.24	2.14
SR2-240-062-Pkg. 2	3.84	3.46	2.69	2.57
SR2-240-093-Pkg. 2	3.84	3.46	2.69	2.57
SR2-650-062-Pkg. 4	13.48§	12.13§§	9.44#	9.03##
SR2-650-093 Pkg. 4	13.48§	12.13§§	9.44#	9.03##
SR3-4.6/062A-Pkg. *	1.28	1.15	.90	.86
SR3-6.6/062A-Pkg. 2*	1.55	1.40	1.09	1.04
SR3-9.7/062A-Pkg. 2*	2.05	1.85	1.44	1.32
SR3-14/062A-Pkg. 2*	2.77	2.49	1.94	1.86
SR3-29-062-Pkg. 2	1.28	1.15	.90	.86
SR3-31-062-Pkg. 2	1.31	1.18	.92	.88
SR3-46-062-Pkg. 2	1.52	1.37	1.06	1.02
SR3-49-062-Pkg. 2	1.53	1.38	1.07	1.03
SR3-66-062-Pkg. 2	1.85	1.67	1.30	1.24
SR3-80-062-Pkg. 2	2.02	1.82	1.41	1.35
SR3-86-062-Pkg. 2	2.06	1.85	1.44	1.38
SR3-100-062-Pkg. 2	2.32	2.09	1.62	1.55
SR3-140-062-Pkg. 2	2.96	2.66	2.07	1.98
SR3-171-062-Pkg. 2	3.49	3.14	2.44	2.34
SR3-240-062-Pkg. 2	4.19	3.77	2.93	2.81
SR3-650-062-Pkg. 4	22.60§	20.34§§	15.82#	15.14##
SR4.5-4.6/062A-Pkg. 2*	1.79	1.61	1.25	1.20
SR4.5-6.6/062A-Pkg. 2*	2.17	1.95	1.52	1.45
SR4.5-9.7/062A-Pkg. 2*	3.01	2.71	2.11	2.02
SR4.5-14/062A-Pkg. 2*	3.99	3.59	2.79	2.67
SR16-29-062-Pkg. 2	1.18	1.06	.83	.79
SR16-31-062-Pkg. 2	1.21	1.09	.85	.81
SR16-46-062-Pkg. 2	1.39	1.25	.97	.93
SR16-49-062-Pkg. 2	1.40	1.26	.98	.94
SR16-66-062-Pkg. 2	1.68	1.51	1.18	1.13
SR16-80-062-Pkg. 2	1.83	1.65	1.28	1.23
SR16-86-062-Pkg. 2	1.87	1.68	1.31	1.25
SR16-100-072-Pkg.4	2.10	1.89	1.47	1.41
SR16-140-062-Pkg. 2	2.67	2.40	1.87	1.79
SR16-171-062-Pkg. 2	3.13	2.82	2.19	2.10
SR16-240-062-Pkg. 2	3.76	3.38	2.63	2.52
SR16-650-072-Pkg. 4*	11.08	9.97	7.76	7.42
SR45-29-062-Pkg. 2	1.55	1.40	1.09	1.04
SR45-31-062-Pkg. 2	1.59	1.43	1.11	1.07
SR45-46-062-Pkg. 2	1.91	1.72	1.34	1.28
SR45-49-062-Pkg. 2	1.95	1.76	1.37	1.31
SR45-66-062-Pkg. 2	2.40	2.16	1.68	1.61
SR45-80-062-Pkg. 2	2.67	2.40	1.87	1.79
SR45-86-062-Pkg. 2	2.76	2.48	1.93	1.85
SR45-100-062-Pkg. 2	3.10	2.79	2.17	2.08
SR45-140-062-Pkg. 2	4.10	3.69	2.87	2.75
SR45-171-062-Pkg. 2	4.93	4.44	3.45	3.30
SR45-240-062 Pkg. 2	5.92	5.33	4.14	3.97
SR45-650-062-Pkg. 4	29.08§	26.17§§	20.36#	19.48##
SR46-240-Pkg. 2	5.99	5.39	4.19	4.01
SW-34-P-89-Pkg. 2*	3.40	...	...	...
SW-34-P-119-Pkg. 2*	3.94	...	...	...
SW-52-P-89-Pkg. 2*	4.50	...	...	...
SW-52-P-119-Pkg. 2*	5.30	...	...	...
SW-52-P-156-Pkg. 2*	6.10	...	...	...
SW-87-P-89-Pkg. 2*	5.92	...	...	...
SW-87-P-119-Pkg. 2*	7.30	...	...	...
SW-87-P-156-Pkg. 2*	9.90	...	...	...

Number	1-19	20-99	100-199	200-999
T-4	$3.18	$2.86	$2.67	$2.13
T-5	3.10	2.79	2.61	2.08

§1-9: §§10-39: #40-99: ##100-199

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VECTOR Electronic Co., Inc.

12460 Gladstone Ave.
Sylmar, Calif. 91342

Tel. (213) 365-9661
TWX: 910-496-1539

GENERAL PRICE LIST

Issue Date JUNE 4 1971

Cancels Sheet Dated APRIL 23 1971

No changes on this page. See page 9.

Ⓘ Increase
Ⓓ Decrease
Ⓝ New
Ⓟ Discontinued

Number	Selling Prices 1-4	1-19	5-24	20-99	25-49	50-99	100-199	200-999
T5.0-Pkg. 100	$ 2.73	(Any Quantity)						
T5.0-Pkg. 1000	16.50	...	...	...	...	...	...	...
T5.1-Pkg. 100	3.10	(Any Quantity)						
T5.1-Pkg. 1000	22.85	...	...	...	...	...	...	...
T-6	...	3.18	...	2.86	...	...	2.67	2.13
T7.33-Pkg. 1000	2.95	...	2.66	...	2.48	...	...	...
T7.34-Pkg. 1000	2.95	...	2.66	...	2.48	...	...	...
T7.35-Pkg. 1000	4.10	...	3.69	...	3.44	...	...	...
T7.36-Pkg. 1000	8.77	...	7.89	...	7.37	...	...	...
T7.37-Pkg. 1000	5.49	...	4.94	...	4.61	...	...	...
T7.39-Pkg. 100	.57	(Any Quantity)						
T7.39-Pkg. 1000	3.63	...	3.27	...	3.05	...	...	...
T7-L	...	3.25	...	2.93	...	...	2.73	2.18
T7-M	...	1.85	...	1.67	...	...	1.55	1.24
T7-M-C	...	3.04	...	2.74	...	...	2.55	2.04
T7-M-S	...	5.91	...	5.31	...	...	4.96	3.96
T7-O	...	3.25	...	2.93	...	...	2.73	2.18
T8-O	...	1.95	...	1.76	...	...	1.64	1.31
T8-O-C	...	3.83	...	3.45	...	...	3.22	2.57
T8-O-S	...	6.60	...	5.94	...	...	5.54	4.42
T9.4-Pkg. 100	...	1.44	...	1.30	...	...	1.21	.96
T9.4-Pkg. 1000	10.18	...	8.55	...	8.14	7.74	...	...
T9.4A-Pkg. 100	...	1.44	...	1.30	...	...	1.21	.96
T9.4A-Pkg. 1000	10.18	...	8.55	...	8.14	7.74	...	...
T9.6-Pkg. 100	...	2.40	...	2.16	...	...	2.02	1.61
T9.6-Pkg. 1000	15.66	...	14.09	...	13.16	...	...	...
T9.62-Pkg. 25	...	1.39	...	1.25	...	...	1.17	.93
T9.62-Pkg. 1000	36.69	...	33.49	...	31.26	...	...	...
T9.63-Pkg. 25	...	2.01	...	1.81	...	...	1.69	1.35
T9.63-Pkg. 1000	53.38	...	48.05	...	44.84	...	...	...
T9.64-Pkg. 25	...	2.60	...	2.34	...	...	2.18	1.74
T9.64-Pkg. 1000	69.24	...	62.32	...	58.16	...	...	...
T9-N	...	1.95	...	1.76	...	...	1.64	1.31
T9-N-C	...	3.24	...	2.92	...	...	2.72	2.17
T9-N-S	...	6.60	...	5.94	...	...	5.54	4.42
T9R-C	...	3.65	...	3.29	...	...	3.07	2.45
T10.0-Pkg. 100	3.88	(Any Quantity)						
T10.0-Pkg. 1000	18.05	...	...	...	...	...	...	...
T10.1-Pkg. 100	3.37	(Any Quantity)						
T10.1-Pkg. 1000	18.05	...	...	...	...	...	...	...
T11.0-Pkg. 100	1.75	(Any Quantity)						
T11.0-Pkg. 1000	8.30	...	...	...	...	...	...	...
T11.1-Pkg. 100	1.75	(Any Quantity)						
T11.1-Pkg. 1000	8.30	...	...	...	...	...	...	...
T12-C	...	3.95	...	3.56	...	...	3.32	2.65
T13.0-Pkg.100	5.36	(Any Quantity)						
T13.0-Pkg.1000	17.00	(5-9) 15.70		...	...	...	...	...
T13.1-Pkg.100	4.47	(Any Quantity)						
T13.1-Pkg.1000	17.00	(5-9) 15.70		...	...	...	...	...
T14.0-Pkg.100	6.21	(Any Quantity)						
T14.0-Pkg.1000	20.60	...	...	...	...	...	...	...
T14.1-Pkg.100	6.21	(Any Quantity)						
T14.1-Pkg.1000	20.60	...	...	...	...	...	...	...
T15.22-Pkg.1000	2.86	...	2.57	...	2.31	...	...	..
T15.23-Pkg.1000	2.88	...	2.59	...	2.42	...	...	...
T15.24-Pkg.1000	2.90	...	2.61	...	2.35	...	...	...
T15.26-Pkg.1000	9.50	...	7.90	...	...	...	...	...
T15.27-Pkg.1000	3.81	...	3.43	...	3.09	...	...	...
T16.12-Pkg.1000	13.78	(5-9)	12.40	(10)	11.16	...	...	...
T16.13-Pkg.1000	13.25	(5-9)	11.95	...	...	...	...	...
T18.0-Pkg.100	2.34	(Any Quantity)						
T18.0-Pkg.1000	14.40	(5-9)	12.96	...	...	...	...	...
T18.1-Pkg.100	3.07	(Any Quantity)						
T18.1-Pkg.1000	16.75	(Any Quantity)						
T19.0-Pkg.100	2.11	(Any Quantity)						

*LIMITED TO AUTHORIZED INDUSTRIAL DISTRIBUTORS AND O.E.M.

Issue Date JUNE 4 1971

Cancels Sheet Dated APR 23 1971

ⓘ Increase ⓓ Decrease [N] New [D] Discontinued	This reprinting covers: [N] & [D] only.

GENERAL PRICE LIST

VECTOR Electronic Co., Inc.
12460 Gladstone Ave.
Sylmar, Calif. 91342
Tel. (213) 365-9661
TWX: 910-496-1539

Number	Selling Prices 1-4	1-19	5-9	5-24	10-24	20-99	25-49	50-99	100-199	200-999
T19.0-Pkg. 1000	$13.88	$ ...	$ 12.62	$ ...	$ ...	$ ...	$ ...	$ ...	$ ...	$ ...
T19.1-Pkg. 100	2.85	...	(Any Quantity)		...	...	...	...	...	...
T19.1-Pkg. 1000	13.88	...	12.62	...	...	...	...	...	...	...
T27-Pkg. 100*	2.66	...	(Any Quantity)		...	...	...	...	...	...
T27-Pkg. 1000*	19.45	...	(Any Quantity)		...	...	...	...	...	...
T28-Pkg. 100	...	1.61	...	...	...	1.45	...	...	1.35	1.08
T28-Pkg. 1000	11.44	...	...	10.30	...	...	9.61	...	...	...
T28-1-Pkg. 100	...	1.61	...	...	...	1.45	...	...	1.35	1.08
T28-1-Pkg. 1000	11.44	...	...	10.30	...	...	9.61	...	...	...
T28-2-Pkg. 100	...	2.14	...	...	...	1.93	...	...	1.80	1.43
T28-2-Pkg. 1000	15.60	...	...	14.04	...	...	12.64	...	...	...
T28-S-Pkg. 100	...	1.72	...	...	...	1.55	...	...	1.44	1.15
T28-S-Pkg. 1000	13.51	...	...	12.17	...	...	11.36	...	...	...
T28S-1-Pkg. 100	...	1.72	...	...	...	1.55	...	...	1.44	1.15
T28S-1-Pkg. 1000	13.51	...	...	12.17	...	...	11.36	...	...	...
T29-Pkg. 100	2.45	...	(Any Quantity)		...	...	...	...	...	...
T29-Pkg. 1000	16.92	...	15.73	...	...	...	...	...	...	...
T30-2-Pkg. 10	...	1.03	...	...	...	.93	...	...	.87	.69
T30-2-Pkg. 100	...	7.70	...	...	...	6.93	...	...	6.47	5.16
T30-2-Pkg. 1000	54.97	...	49.47	...	46.18	...	43.87	43.87	...	...
T30N-2-Pkg. 10	...	.99	...	...	...	.89	...	...	.83	.66
T30N-2-Pkg. 100	...	7.23	...	...	...	6.51	...	...	6.07	4.84
T30N-2-Pkg. 1000	50.44	...	45.40	...	42.37	...	40.25	40.25	...	...
T32-Pkg. 10	1.49		(Any Quantity)							
T32-Pkg. 100	10.89		(Any Quantity)							
T32-Pkg. 1000	80.24	...	...	72.25	...	...	65.00	...	...	...
T32-1-Pkg. 10	1.49		(Any Quantity)							
T32-1-Pkg. 100	10.89		(Any Quantity)							
T32-1-Pkg. 1000	80.24	...	...	72.25	...	...	65.00	...	...	...
T32A-Pkg. 10	1.40		(Any Quantity)							
T32A-Pkg. 100	10.30		(Any Quantity)							
T32A-Pkg. 1000	78.00	...	...	70.20	...	...	...	...	...	...
T32A-1-Pkg. 10	1.40		(Any Quantity)							
T32A-1-Pkg. 100	10.30		(Any Quantity)							
T32A-1-Pkg. 1000	78.00	...	...	70.20	...	...	...	...	...	...
T42-1-Pkg. 100	...	1.82	...	...	...	1.64	...	...	1.53	1.22
T42-1-Pkg. 1000	11.70	...	...	10.50	...	...	9.95	...	...	...
T44-Pkg. 100	...	2.96	...	...	...	2.66	...	...	2.49	1.98
T44-Pkg. 1000	21.48	...	...	19.33	...	...	...	...	...	...
T45-4-Pkg. 16	2.29		(Any Quantity)							
T45-4-Pkg. 100	9.00		(Any Quantity)							
T45-4-Pkg. 1000	81.00		(Any Quantity)							
T45-32-Pkg. 2	2.29		(Any Quantity)							
T45-32-Pkg. 10	7.20		(Any Quantity)							
T45-32-Pkg. 100	65.00		(Any Quantity)							
T46-Pkg. 100	...	2.69	...	...	...	2.42	...	...	2.26	1.80
T46-Pkg. 1000	19.95	...	17.96	...	...	...	...	...	...	...
[N] T46-1-Pkg. 100	3.20	...	3.20	...	...	2.88	...	...	2.69	2.14
[N] T46-1-Pkg. 1000	25.00	...	22.50	...	...	...	...	...	...	...
T57-Pkg. 10	1.79		(Any Quantity)							
T57-Pkg. 100	14.89		(Any Quantity)							
T58-Pkg. 10	1.10		(Any Quantity)							
T58-Pkg. 100	8.69		(Any Quantity)							
T64-Pkg. 50	.46		(Any Quantity)							
T79-S	...	1.65	...	...	...	1.49	...	...	1.39	1.11
T102-Pkg. 100	.78		(Any Quantity)							
T102-Pkg. 1000	4.16	...	3.90	...	...	...	...	...	...	...
T103-Pkg. 100	1.95	...	(Any Quantity)							
T103-Pkg. 1000	14.22	...	12.80	...	...	...	...	...	...	...
T104-Pkg. 10	...	1.21(1-49)		1.09(50-199)		.85(200-499)		.81(500-999)		...
T104-Pkg. 100	...	11.00(1-49)		9.90(50-199)		7.70(200-499)		7.37(500-999)		...
[D] T105*; T106 (6/71)	2.56ea									
T107-Pkg. 10	2.39		(Any Quantity)							
T107-Pkg. 100	22.69		(Any Quantity)							
T120-Pkg. 50	4.25		(Any Quantity)							
T120-1-Pkg. 50	6.69		(Any Quantity)							
T120-1-Pkg. 250	29.90		(Any Quantity)							
T429	...	29.70	...	...	...	26.73	...	...	24.95	19.90
T789	...	6.27	...	...	...	5.64	...	...	5.27	4.20
T789-C	...	11.69	...	...	...	10.52	...	...	9.82	7.83
T789-S	...	19.47	...	...	...	17.52	...	...	16.36	13.05
T807-S	...	1.52	...	...	...	1.36	...	...	1.28	1.01
T912-C	...	9.89	...	...	...	8.90	...	...	8.31	6.62

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VECTOR Electronic Co., Inc.

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Sylmar, Calif. 91342

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GENERAL PRICE LIST

Issue Date JUNE 4 1971

Cancels Sheet Dated APR 23 1971

This reprinting covers:
[D] only.

[↑] Increase
[↓] Decrease
[N] New
[D] Discontinued

Number	Selling Prices 1-4	5-24	25-49
TF2.23-Pkg. 1000	$ 5.99	$ 5.39	$ ...
TF15.23-Pkg.1000	4.00	3.60	3.24
TF15.24-Pkg.1000	6.23	5.61	...

Number	1-49
TS81*	$ .97
TS81N*	2.22
[D] TS81N-1* (6/71)	
TS169*	1.44
TS169N*	2.69
[D] TS169N-1* (6/71)	
TS219*	1.77
TS219N*	2.92
[D] TS219N-1* (6/71)	
TS240*	1.50

W4-1-Pkg. 75*	.40	(Any Quantity)
W4-2-Pkg. 50	.95	(Any Quantity)
W4-3-Pkg. 75*	2.18	(Any Quantity)
[D] W5-1-Pkg. 50 (6/71)	.45	
W5-2-Pkg. 25*	.50	(Any Quantity)
[D] W6-1-Pkg. 25*(6/71)	.45	
W6-2-Pkg. 26*	.30	(Any Quantity)
W6-4-Pk. 26*	.75	(Any Quantity)
[D] W10-1-Pkg. 26*(6/71)	.55	

Number	1-49	50-199	200-499	500-999
W16-31-31*	$ 3.41	$ 3.07	$ 2.39	$ 2.28
W20-46-31*	3.93	3.54	2.75	2.63
W20-46-46*	4.34	3.91	3.04	2.91
W20-66-46*	5.15	4.64	3.61	3.45
W30-66-46*	5.95	5.36	4.17	3.99
W30-86-46*	6.50	5.85	4.55	4.36
W30-100-46*	7.00	6.30	4.90	4.69
W30-100-66*	7.80	7.02	5.46	5.23
W30-100-80*	8.35	7.52	5.85	5.59
W30-140-80*	10.10	9.09	7.07	6.77
W45-66-46*	6.15	5.54	4.31	4.12
W45-86-46*	6.95	6.26	4.87	4.66
W45-100-46*	7.60	6.84	5.32	5.09
W45-100-66*	8.58	7.72	6.01	5.75
W45-140-80*	11.78	10.60	8.25	7.89
W60-86-46*		(On Request)		
W60-100-66*		(On Request)		
W60-140-80*		(On Request)		
W90-86-46*		(On Request)		
W90-100-66*		(On Request)		
W90-140-80*		(On Request)		

Number	Selling Prices 1-49	50-199	200-499	500-999
X32AA18	$ 3.69	$ 3.32	$ 2.59	$ 2.46
X32AA18-1	1.21	1.09	.85	.81
X64AA18	4.84	4.36	3.39	3.25
X64AA18-1	1.32	1.19	.92	.88
X64AA32	6.05	5.45	4.24	4.06
X64AA32-1	1.38	1.24	.97	.92
X85G24EP	5.39	4.85	3.77	3.61
X85G42EP	6.82	6.14	4.77	4.57

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Vector Electronic Company

INCORPORATED

12460 Gladstone Ave. Sylmar, Calif. 91342
(Metropolitan Los Angeles Area)

AMENDMENT TO GENERAL PRICE LIST DATED 6-4-71
EFFECTIVE DATE OF AMENDMENT: AUGUST 1, 1971

0077-50-6- Pkg. 50*	2.99 Pkg. Any Qty.				
N 0077-50-7-Pkg. 50 *	6.95 Pkg. Any Qty.				
0077-50-8-Pkg. 50*	2.99 Pkg. Any Qty.				
0721-05-11	.12 ea. Any Qty.				
	1-19	20-99	100-199	200-999	
ⓓ 85F42WEC1	7.25	6.53	6.09	4.86	
	1-49	50-199	200-499	500-999	
512*	.97	.87	.68	.65	
513*	.97	.87	.68	.65	
ⓐ 514*	1.07	.96	.75	.72	
	1-19	20-99	100-199	200-999	
856-112WE*	2.55	2.30	2.14	1.71	
856-225WE*	3.56	3.20	2.99	2.39	
3473-3	Change to 3474-3* (typo)				
3797*	3.76	3.38	3.16	2.52	

	Pkg. of 5		Bulk		
	1-9	10-19	100	500	1000
3835-Pkg. 5*	2.00	1.80			
3835-Bulk*			.28	.21	.20
3835-1- Pkg. 5*	2.00	1.80			
N 3835-1-Bulk *			.28	.21	.20
3835-2- Pkg. 5*	2.00	1.80			
3835-2-Bulk*			.28	.21	.20
AP19-70-300 †	8.95 Any Qty.				
ⓐ AP19-70-600 †	8.95 Any Qty.				
AP19-123-1200 †	11.70 Any Qty.				
BP.3-4-11*	Change to BP3-4-11*				
BP.3-4-18*	Change to BP3-4-18*				
BR5.1- Bulk	Change 5000 price to $16.65/M (typo)				
ⓓ BR24A-Pkg. 2*	14.97 Any Qty.				

	1-9	10-49	50-199	200-499	
CCK-13 *	ⓓ 29.50	ⓓ 28.00	27.75		
CMA-3-16*	53.54	48.06	42.72	37.38	Drop 500-999 price break
CMA-3-20*	49.24	44.31	39.88	34.47	
ⓐ CMA-4-20*	50.36	45.32	40.29	35.25	
CU45/27-1R	Change to	CU45/27-1R-Pkg. 5			
CU65/45-1R	Change to	CU65/45-1R-Pkg. 5			
CU65/45-2R	Change to	CU65/45-2R-Pkg. 5			
CU70P45-2R	Change to	CU70P45-2R-Pkg. 5			
CU90/80- 1R	Change to	CU90/80-1R- Pkg. 5			
EFP104-9.7*†	Remove †				
EFP168-9.7*†	Remove †				
EFP308-9.7*†	Remove †				
EFP458-9.7*†	Remove †				

FP1.6-52*	Change to	FP16-52*
FP1.6-87*	Change to	FP16-87*
Ⓐ HA11-Pkg. 4*	Ⓐ 2 .38 Pkg. Any Qty.	

	1-999	1M-499
K9.06*	Ⓐ .93	.84

	Pkg. 5		Bulk		
	1-9	10-19	100	500	1000
K3850-Pkg. 5*	.50	.45			
K3850-Bulk*			.072	.058	.051
K3850-1-Pkg. 5*	.55	.50			
K3850-1 Bulk*			.078	.061	.054
K3850-2-Pkg. 5*	.60	.54			
K3850-2-Bulk*			.085	.07	.062
K3851-Pkg. 5*	1.40	1.26			
K3851-Bulk*			.20	.158	.141
Ⓝ K3851-1-Pkg. 5*	1.50	1.35			
K3851-1-Bulk*			.216	.17	.152
K3851-2-Pkg. 5*	1.75	1.58			
K3851-2-Bulk*			.248	.196	.174
K3852-Pkg. 5*	2 .66	2.34			
K3852-Pkg. 100*			36.50	30.36	28.84
K3852-1Pkg. 5*	3.10	2.79			
K3852-1-Pkg. 100*			43.80	36.50	34.67
K3852-2-Pkg. 5*	3.80	3.42			
K3852-2-Pkg. 100*			53.50	46.15	43.05

Ⓐ L2711-9 thru -12*	.59 ea. Any Qty.
LA1-PX-3-Pkg. 12*	3.20 Any Qty.
Ⓝ LA1-PY-3-Pkg. 12*	2.40 Any Qty.
NT4-6A-Pkg. 12*	1.30 Any Qty.
Ⓐ P141D	2 .70
Ⓝ P152-Pkg. 2*	1 .60
PL8097*	200-499 (price break omitted) 1.20
Ⓝ SC4-8-Pkg. 24*	1 .50 Any Qty.
Ⓓ SC4-9-Pkg. 24*	On Request
SR1-650-062-Pkg. 4	Change to follow SR1-240-062-Pkg. 2
SR16-650-072-Pkg. 4*	Change to SR16-650-062-Pkg. 4 §11.08 §§9.97 # 7.76 ## 7.42 (typo in part no. and price breaks omitted).

	1-49	50-199	200-499	500-999
X3770-062	1 .28	1.15	.90	.86
Ⓝ X3770-093	1 .28	1.15	.90	.86
X3770-1	1.38	1.24	.97	.92

Remove "† $5.00 setup charge" from bottom of pp. 5 and 6.

TERMS AND CONDITIONS OF SALES

Minimum Billing: $15.00 Net exclusive of setup charges
For industrial and O. E. M. prices in quantities greater than shown above, consult factory.
Terms: Net 30 days; F. O. B. - Sylmar, California

All prices terms and conditions subject to change without notice. Prices charged will be those in effect at time of shipment.

ALABAMA

Birmingham

M. G. Electronics
3112 6th Avenue, South 35233

Huntsville

Electronic Wholesalers
2310 Bob Wallace Ave., S. W. 35805

ARIZONA

Phoenix

Sterling Electronics, Inc.
1930 North 22nd Avenue 85006

Parts Electronic of Arizona
1310 North 7th Street P. O. Box 2750 85006

R. V. Weatherford
1917 N. 25th Drive 85009

CALIFORNIA

Anaheim

R. V. Weatherford Company, Inc.
1550 Babbitt Ave. 92805

Glendale

R. V. Weatherford Company, Inc.
6921 San Fernando Road 91201

Hollywood

Hollywood Radio & Electronics, Inc.
5250 Hollywood Boulevard 90027

Inglewood

Newark Electronics Company, Inc.
4747 West Century Blvd. 90301

Los Angeles

California Electronics Supply, Inc.
1911 Armacost Avenue 90025

Kierulff Electronics, Inc.
2585 Commerce Way 90022

Radio Products Sales, Inc.
1501 South Hill Street 90015

Mountain View

Brill Electronics
1065 Terra Bella Avenue 94041

Elmar Electronics, Inc.
2288 Charleston Road 94040

Oakland

Brill Electronics
610 East 10th Street 94606

Palo Alto

Zack Electronics
654 High Street 94301

R. V. Weatherford
3240 Hillview 94304

Pasadena

Milo of Calif. Inc.
1759 East Colorado Blvd. 91106

Empire Electronics Distr., Inc.
37 East Union Street 91101

Riverside

Electronic Supply Riverside, Inc.
2486 Third Street 92507

Sacramento

Dunlap Electronics
1800 - 18th Street 95814

CALIFORNIA (Continued)

San Diego

Milo of California, Inc.
2060 India Street 92101

San Francisco

Zack Electronics
1444 Market Street 94102

San Jose

Peninsula Electronic Supply, Inc.
980 S. First St. 95113

Quement Electronics
1000 So. Bascom Avenue 95128

San Luis Obispo

Mid State Electronics
1441 Monterey Street 93401

COLORADO

Denver

Newark-Denver Electronic Supply Co.
2170 S. Grape Street P.O. Box 22045 80222

DIST. OF COL.

Washington

Electronic Wholesalers, Inc.
2345 Sherman Avenue, N.W. 20001

FLORIDA

Orlando

Powell-Florida Electronics
2049 W. Central Blvd. 32805

Tampa and all branches

Thurow Electronics
121 South Water Street 33602

GEORGIA

Atlanta

Jackson Electronics
1135 Chattahoochee Ave. N.W. 30318

HAWAII

Honolulu

Precision Radio, Limited
1160 So. King Street P.O. Box 2573 96814

ILLINOIS

Chicago

Allied Electronics Corporation
111 North Campbell Avenue 60612

Newark Electronics Corporation
500 North Pulaski Road 60624

INDIANA

Indianapolis

Graham Electronics Supply, Inc.
133 S. Pennsylvania 46204

RA-DIS-CO, INC.
814 North Senate Avenue 46202

IOWA

Cedar Rapids

Deeco, Inc.
2500 - 16th Avenue S. W. 52406

KENTUCKY

Louisville

P. I. Burks Co.
P. O. Box 1015, 842 South Seventh Street 40201

LOUISIANA

New Orleans

Radio Parts, Inc.
1112 Magazine Street 70130

Shreveport

Industrial Electronic Supply, Inc.
2422 Southern Ave. 71104

MARYLAND

Baltimore

Electronic Wholesalers, Inc.
3200 Wilkens Avenue 21229

Kann Ellert Electronics, Inc.
2050 Rock Rose Avenue 21211

Beltsville

Powell Electronics-Washington, Inc.
10728 Hanna St. 20705

Rockville

Capitol Radio Wholesalers, Inc.
12227 Wilkins Ave. 20852

MASSACHUSETTS

Boston Area

Cramer Electronics, Inc.
85 Wells Ave., Newton Centre 02159

De Mambro Electronics
1095 Commonwealth Avenue, Boston 02215

Doric Electronics, Inc.
54-60 Lexington Street, West Newton 02165

Gerber Radio Supply Company
852 Providence Hwy. US Rte. 1
Dedham 02026

Radio Shack - Durrell
920 Main Street, Waltham 02154

Sager Electrical Supply Company, Inc.
172 High Street, Boston 02107

MICHIGAN

Ann Arbor

Wedemeyer Electronic Supply Company
215 North Fourth Avenue 48108

Detroit

Newark-Detroit Electronics, Inc.
20700 Hubbell Avenue 48237

Radio Specialties Company, Inc.
12775 Lyndon Street 48227

MINNESOTA

St. Paul

Gopher Electronics Company
2520 West Larpenteur Avenue 55113

MISSOURI

Kansas City

Walters Radio Supply, Inc.
3635 Main Street 64111

St. Louis

Olive Industrial Electronics, Inc.
6662 Olive Blvd. 63130

NEVADA

Reno

Electronic Distr. Co. of Nevada
720 Tahoe Street P. O. Box 2918 89502

NEW JERSEY

Camden
General Radio Supply Company, Inc.
600 Penn Street at Bridge Plaza 08102

Cedargrove
ASW Electronics Corp.
216 Little Falls Rd. 07009

Hanover
STEPCO
36 Route 10 07936

Springfield
Federated Purchaser, Inc.
155 U.S. Route 22 07081

NEW MEXICO

Albuquerque
Kierulff Electronics
6405 Acoma Rd. S.E. 87108

NEW YORK

Binghamton
Stack Industrial Electronics Corp.
45 Washington Street 13901

Buffalo
Radio Equipment Corporation
312 Elm Street 14203

Summit Distributors, Inc.
916 Main Street 14202

New York City Area
Arrow Electronics, Inc.
900 Broad Hollow Road (Rt. 110)
Farmingdale, L. I. 11735

H. L. Dalis, Inc.
35-35 24th Street, Long Island City 11106

Harrison Radio Corporation
20 Smith Street, New York 11735

Harvey Radio Corporation
2 West 45th Street, New York 10036

Harvey Radio, Inc.
60 Crossways Park West, Woodbury, L. I. 11797

Milo Electronics Corporation
325 Hudson Street, New York 10013

Newark Electronic Center
160 5th Avenue, New York 10010

Peerless Radio Corporation
19 Wilbur Street, Lynbrook, L. I. 11563

Terminal-Hudson Electronics, Inc.
236 West 17th Street, New York 10011

NORTH CAROLINA

Raleigh
Southeastern Radio Supply Co., Inc.
414 Hillsboro Street 27603

Winston-Salem
Electronics Wholesalers, Inc.
938 Burke Street 27101

OHIO

Akron
Akron Electronics Supply, Inc.
107 South Arlington Street 44306

Cincinnati
Newark-Herrlinger Electronics Corp.
112 East Liberty Street 45210

OHIO (Continued)

Cleveland
Pioneer Standard Electronics, Inc.
5403 Prospect Avenue 44103

Radio and Electronic Parts Corp.
3235 Prospect Avenue 44115

Columbus
Thompson Radio Supply, Inc.
182 East Long Street 43215

Dayton
Srepco, Inc.
314 Leo Street 45404

OKLAHOMA

Oklahoma City
Trice Wholesale Electronics
4701 North Stiles 73105

Tulsa
Radio, Inc.
1000 South Main Street 74119

OREGON

Portland
United Radio Supply, Inc.
123 7th Ave. N.E. 97232

PENNSYLVANIA

Allentown
Valley Electronics
101 North 7th Street 18101

Philadelphia
Powell Electronics, Inc.
South Island Road, P.O. Box 8765 19101

Radio Electric Service Co. of Penna.
701 Arch Street 19106

Pittsburgh
RPC Electronics
620 Alpha Drive 15238

RHODE ISLAND

Providence
Wm. Dandreta & Company
28 Wolcott Street 02908

SOUTH CAROLINA

Charleston
Radio Laboratories
475 East Bay Street P. O. Box 2305 29403

TENNESSEE

Fayetteville
Powell Electronics-Huntsville
P. O. Box 488 37334

Memphis
Bluff City Distributing Co.
234 East Street 38101

TEXAS

Dallas
Wholesale Electronic Supply
2809 Ross Avenue 75201

El Paso
Midland Specialty Company
2235 Wyoming Avenue 79903

Fort Worth
Wholesale Electronic Supply
550 So. Freeway 76104

TEXAS (Continued)

Garland
Newark-Dallas Electronics Corp.
707 Easy Street 75040

Houston
Harrison Equipment Company, Inc.
1422 San Jacinto St. P. O. Box 3268 77002

UTAH

Ogden
Ballard Supply Company
3109 Washington Boulevard 81401

WASHINGTON

Seattle
Almac/Stroum
5811 Sixth Ave. So. 98108

WISCONSIN

Milwaukee
Radio Parts Company, Inc.
1314 North 7th Street 53205

CANADA

ALBERTA

Calgary
Canadian Electronics Ltd.
336 - 4th Avenue, S. E.

Edmonton
Canadian Electronics, Ltd.
10633 - 109th Street P. O. Box 2330

Lethbridge
Canadian Electronics Ltd.
236A - 13th Street, North

Medicine Hat
Canadian Electronics, Ltd.
520A - 4th Avenue, S. E.

BRITISH COLUMBIA

Vancouver
Canadian Electronics Ltd.
971 Richards Street

MANITOBA

Winnipeg
Canadian Electronics Ltd.
1340 Sargent Avenue

SASKATCHEWAN

Regina
Canadian Electronics Ltd.
2060 Halifax Street

ONTARIO

Ottawa
CESCO Electronics, Ltd.
1300 Carling Avenue

Toronto
Electro Sonic Supply Company, Ltd.
543 Yonge Street

CESCO Electronics, Ltd.
24 Martin Ross Ave. Downsview

QUEBEC

Montreal
CESCO Electronics, Ltd.
4050 Jean Talon Street West

The Radio Centre
1505 Bois Franc Road